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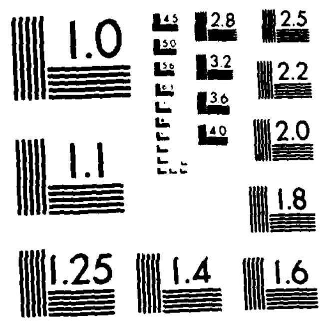

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Final Interim Report

Archaeological Investigations in the Upper Tombigbee Valley, Mississippi: Phase I

Judith A. Bense, Editor

With the Assistance of

Jerry R. Galm and David H. Dye

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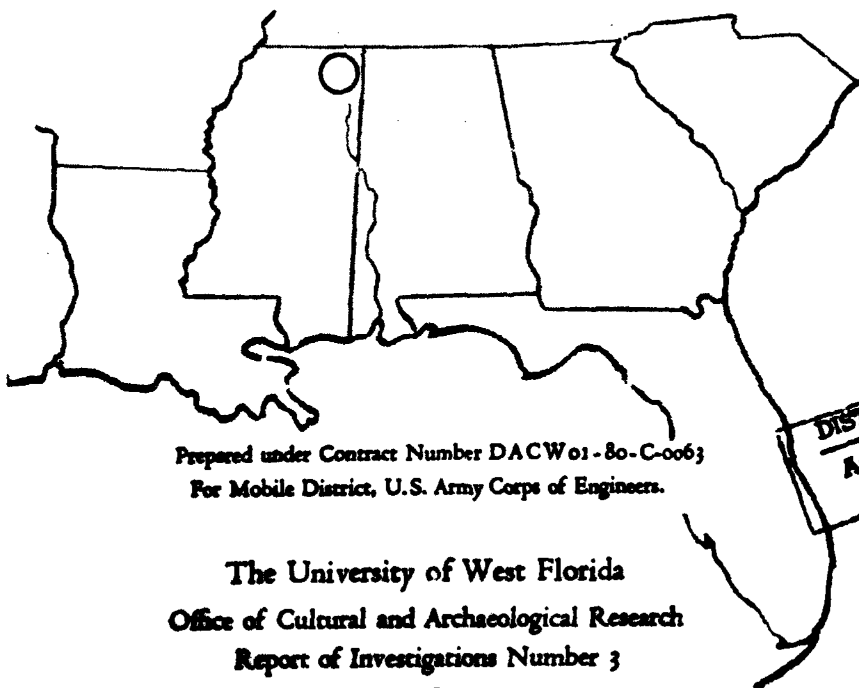

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This document is a report of archaeological investigations at eleven sites in the Canal and River Section of the Tennessee-Tombigbee Waterway. These investigations include the excavation of four sites and the testing of seven others. This report is a description of this project and includes the research design, a summary of the archaeological background, and a full description of the data recovery methods and techniques. For each site investigated in the project, a complete report of the specific procedures and a description of the results are provided. A summary of the total results is also contained in the final chapter. Attached to the report are a series of special studies, manuals for field, laboratory and data methods, and the original detailed research design. Also included is a complete data set on microfiche which presents the location, classification and measurement of all specimens recovered in the project.

The results of this 15 month field effort contributed much to our understanding of the Archaic and Gulf Formational State, specifically, the Early Archaic (Kirk), initial Late Archaic (Benton), and late Gulf Formational (Alexander). Isolated components of these cultures have been recovered and provide primary data for the reconstruction of chronology and lifeways of these portions of the prehistoric occupation of the Upper Tombigbee Valley. With additional, more intensive study of the recovered material, it will be possible to address the cultural process issue of adaptation to the post-glacial climate maximum, the Altithermal. Obvious differences in site use and area settlement pattern, subsistence strategy and scheduling, and technology were employed between ca. 6500 and 5500 B.P.

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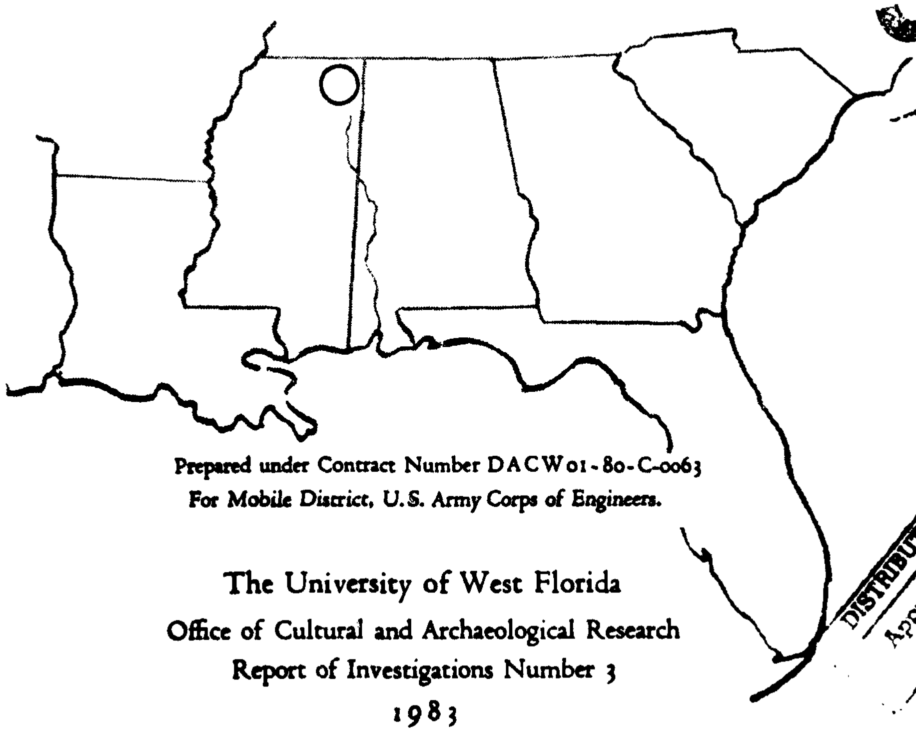

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TABLE OF CONTENTS

VOLUME 2

CHAPTER 6
by
Jerry R. Galm, Betty J. Duggan, David H. Dye, and David E. Pettry

CHAPTER 7
by
Judith A. Bense
with contributions from
David E. Pettry

CHAPTER 8
by
Jerry R. Galm
with contributions from
Michael J. Rodeffer
Joseph M. Studer
David E. Pettry

LIST OF TABLES

Table Number		Table Page #
	CHAPTER 6	

CHAPTER 7

CHAPTER 8

LIST OF FIGURES

CHAPTER 7

CHAPTER 8

CHAPTER 6

EXCAVATIONS AT THE ARALIA SITE: 22IT563

INTRODUCTION

SITE PROJECT HISTORY

Site Identification

The Aralia site, 22IT563, was initially located during a survey of the Canal Section of the Tennessee-Tombigbee Waterway (Blakeman 1976:19). Transitional Archaic-Woodland, Miller I, Miller II, and Miller III period occupations were reported, although no testing was conducted. A testing program was undertaken at the Aralia site in 1979 by the University of Alabama. Preliminary analyses of artifacts recovered during this program indicated that 22IT563 was a single component Alexander site (Bense 1979b:44). A more detailed reanalysis of this material (Bense 1982), however, indicated that occupation at the site may have spanned the Late Archaic through the Late Woodland periods. Excavations were recommended at the Aralia site based on the identification of an intact Alexander component (Bense 1979b:42).

Duration of Fieldwork

Following the recommendations derived from the 1979 Alabama testing program, an excavation plan was developed and implemented at 22IT563 during the Phase I program conducted by the University of West Florida. The Phase I archaeological investigations at Aralia were initiated in compliance with a scope-of-work issued by the U.S. Army Corps of Engineers, Mobile District. Fieldwork began October 13, 1980, and ended January 23, 1981.

RESEARCH RATIONALE

The occurrence of a possibly undisturbed Alexander component offered an opportunity to expand the information base of a little-researched cultural manifestation. Excavations at this site were undertaken in order to mitigate the impact of future shoreline erosion.

SITE DESCRIPTION

LOCATION

Legal Description

The Aralia site (Figure 6.1), situated in the NE 1/4, NE 1/4, SE 1/4, Section 12, Township 8S, Range 8E, longitude 88° 24' 4" and latitude 34° 24' 52", is located approximately 13.4 km northeast of the town of Fulton, the county seat of Itawamba County, Mississippi. Universal Transverse Mercator (UTM) coordinates are: Zone 16, Easting 371220, Northing 3807050 (Kirkville, Mississippi Quadrangle 1965: USGS 7.5' Series).

Tennessee-Tombigbee Waterway Project Setting

Site 22IT563 is located in the Lock D Canal Section of the Tennessee-Tombigbee Waterway Project. Upon completion of the waterway project, the Aralia site will lie on the eastern shoreline of the waterway.

LOCAL ENVIRONMENT

Physiography

The Aralia site (Figure 6.2) is situated at the juncture of the Tombigbee floodplain and the eastern valley wall (Figure 6.3) near the northwestern tip of "Beaver Lake Ridge." The site is on a 10-12% slope along the base of a steep (25°-30°) Pleistocene terrace remnant. 22IT563 is bounded on the north, south, and east by Beaver Lake Ridge and on the west by the floodplain of the Tombigbee River. An unknown percentage of the western portion of the site has been disturbed by an access road. The eastern section of the site has been dissected by erosional gullies and rivulets, and pockmarked by decaying stumps.

The site proper is located adjacent to the Tombigbee River floodplain (Figure 6.4). The site does not have an apparent topographic rise, but conforms with the general bottom slope of the valley wall. The site appears to be a truncated, narrow sandy terrace which has been covered by colluvial/alluvial materials. Colluvial deposits resulted from downslope movement of sandy sediments along the valley wall. Several flowing springs occur at the base of the valley wall at a similar elevation to the site. Active small slumps and mass movement areas exist upslope from the site.

Historic Land Use

Prior to excavation, the Aralia site had been subject to lumbering activities which took place locally in the 19th and 20th centuries. The dense hardwood presently covering the site is all secondary growth. The location of 22IT563 near the end of an access road has resulted in increased dumping (trash) in recent years. At the start of pre-excavation clearing, the surface of the site was littered with recent debris ranging from beer cans to discarded auto parts. In addition, an undetermined portion of the western section of 22IT563 had been destroyed by erosion along the access road; a process which is accelerated during periods of flooding. None of these historic activities or events, however, appear to have seriously damaged the buried cultural components at the site.

Plant and Animal Communities

Modern vegetation at the Aralia site includes a secondary growth of oak-hickory forest with a thick, complementary understory. Drainage in the adjacent floodplain in recent times has been poor, partially due to the re-introduction of beaver and stream channelization. Standing pools of water are common on the floodplain from fall through early summer.

Although the Tombigbee River is currently located 1.23 km west of the site, historically and prehistorically the utilization of the floodplain adjacent to 22IT563 would have been greatly influenced by local fluvial conditions. During periods of increased precipitation, relatively high water levels would have supported a mesic forest, while decreased effective precipitation would have produced a more xeric forest (oak-hickory-pine), not unlike that found today on adjacent ridgetops.

The environment surrounding 22IT563 most likely would have provided abundant plant and animal resources throughout the prehistoric occupation of this area. Species available for historic and prehistoric exploitation would probably have included a variety of seeds, grasses, legumes, and herbaceous plants, as well as bobwhite, quail, cottontail, wild turkey, squirrels, red and gray fox, raccoon, deer, and bear (USDA 1979:29).

EXCAVATION STRATEGIES

RESEARCH OBJECTIVES

The purpose of the 1980-1981 excavations at 22IT563 was to provide additional information on the Alexander component recorded during earlier testing of the site. The principal objectives of this investigation included determination of the chronological placement and cultural content of the Alexander component, identification of subsistence evidence associated with this component, and definition of the activity sets represented at the site. Excavations were employed to recover information sets necessary to answer these research questions.

METHODS AND TECHNIQUES

Recovery Procedures

The location of 22IT563 on a steeply sloping segment of the valley wall required careful examination and delineation of the intra- and off-site stratigraphy prior to the initiation of controlled excavations. Three techniques of stratigraphic examination were employed: (1) cleaning profiles and redefining strata in the 1979 test units (Bense 1979b); (2) the excavation of four backhoe trenches to facilitate correlation of major stratigraphic units; and (3) the placement of five hand-dug trenches to accommodate stratigraphic identifications of site boundaries (Figure 6.2).

Horizontal control was established by using 1 x 2 m x 10 cm excavation units, each of which received its own Master ID number. These units accommodated the need for large sample size and ease of excavation provided by the more traditional 2 x 2 m unit with an approximation of the slope change (10-12% per 1 m) of the cultural and natural deposits at the site. Arbitrary levels were excavated to accomodate the difficulty encountered in consistent identification of stratigraphic boundaries. Vertical control was provided through a tripartite designation based on mean sea level elevation applicable to across-site usage and a unit-specific, below surface designation. For example, Level 16-V-2 represents the 10 cm elevation unit, 91.50-91.40, on a site-wide basis, the fifth (V) excavation level in the horizontal unit (1 x 2 m), and the second (2) sublevel (where the 10 cm level is subdivided into two 5 cm sublevels). The absence of a digit after the Roman numeral indicates the level was not subdivided.

The primary emphasis of the Aralia site excavations was the recovery of information on the Alexander component. To take maximum advantage of the stratigraphic and artifactual information

recovered during the 1979 Alabama testing program, two 4 x 4 m excavation blocks (Blocks A and B; Figure 6.2) were initially located to incorporate two of the original 2 x 2 m test units into the 1980 excavations. When excavation revealed horizontal variation in the strata containing the Alexander component, these blocks were expanded to explore the extent of this variation. Block A eventually incorporated 40 square meters of excavated area, while Block B contained 36 square meters. Seven 1 x 2 m test units and two 1 x 1 m units were judgmentally placed to the east and south of Blocks A and B to explore the horizontal extent of and the variation within the Alexander strata. In addition, Unit 76.50S/87W, a 1 x 1 x 1 m test unit excavated during the Alabama testing program, was excavated down an additional 30 cm to insure there were no deeply buried cultural deposits upslope.

All 1 x 2 m x 10 cm units were processed through 0.25-inch hardware cloth, and four-liter flotation samples were extracted from each unit. In addition, selected 10 cm levels were processed through 0.125-inch mesh. All features, except Features 10 and 11, were floated to facilitate microrecovery of fine cultural debris. Because of their size, Features 10 and 11 were processed through 0.25-inch hardware cloth with selected segments processed through 0.125-inch mesh. Control blocks, incorporating a 6-liter soil perpetuity sample, a 4-liter flotation sample, and a 50 cm^3 fine-screen sample, were established in Blocks A and B and in Features 10 and 11.

SOILS

UPLANDS

The steep valley walls (20-45% slopes) east of the site are comprised of the Smithdale association. The soils on the slopes above the site have definitive yellowish-red argillic horizons (B2t) of sandy loam and sandy clay loam textures with clay skins on ped faces and sandy bridging. The soils are siliceous and strongly acid with well expressed pedogenic development (Table 6.1).

FLOODPLAIN

The floodplain below and to the west of the site is comprised of the Kirkville-Mantachie soil association. These soils have little profile development and weakly expressed pedogenic development (Table 6.1).

SITE

The site is located in a narrow transition zone between the steep valley wall and the level floodplain. The soils are very sandy and exhibit weakly developed horizons and profiles. Surface horizons are typically very dark grayish brown loamy sand or sandy loam and are underlain by yellowish-brown subsoils (Table 6.2). Lamellae commonly occur at depths below 60 cm. Base matrix colors of the soil horizons are in a Munsell hue of 10YR. The prominent humic staining and dark reddish-brown colors associated with other culturally-altered sites in the project area are not evident at this site (Figure 6.5). A degree of in-place firmness and dark yellowish-brown (10YR 3/4) color occurred in the zone with major cultural alteration. Soil pH levels ranged from 5.2 to 5.4 (Table 6.3) which was similar to adjacent soils off-site. High sand contents and very low clay contents characterize the typical pedons of the site (Table 6.3).

PEDOGENIC INFERENCES

The soils comprising the site do not have prominent morphological features to indicate extensive cultural modification and habitation (Figures 6.6 - 6.8). The site appears to be located on an active erosional-depositional surface, and mass movement may have mixed the upper layers. The bottom slope topographic position is also subject to high levels of surface runoff which could result in elevated rates of leaching.

CULTURAL REMAINS

INTRODUCTION

The large grid blocks excavated at 22IT563 were intended to maximize information return on the kinds and numbers of cultural features present and the make-up of material assemblages during the span of the prehistoric occupation at the site. These primary sources of data (cultural features and material assemblages) thus offered the potential to document the nature of the Alexander occupation (and any others present) and to interpret prehistoric lifeways during this hitherto poorly understood archaeological component.

Toward these ends, the excavations and subsequent analyses conducted during Phase I produced mixed results. Cultural features recorded at the site, and discussed below, provided few new insights on the nature of activities conducted during any segment of the archaeological record. In general, features were diffi-

cult to distinguish and expose in the loose, sandy site sediments and were also difficult to interpret in terms of the activities that produced them. This finding was not unanticipated, however, in view of the generally poor quality of the feature record compiled to date at sites included in Phase I of the Midden Mound Project (see Chapters 5-14 in this report). For the most part, features at the Aralia site consist of "dark stains" that in at least two major instances (Features 10 and 11) appear to be remnants of a larger cultural "midden," referred to as Zone 2 (discussed below).

Cultural materials, however, provide a less ambiguous corpus of data that document both the time frame and general activity modes represented during the occupation of the Aralia site. Artifacts recovered from the site form an assemblage that confirms the major component as belonging to the Henson Springs phase (Jenkins and Curren 1975:56). Ceramics, and to some extent, chipped stone artifacts (primarily projectile point/knives) suggest limited pre- and post-Alexander phase components in addition to the major occupation. The possibility of earlier Wheeler and later Miller components remains tentative, but in any event, reflects only limited or short-term use of the site.

During initial considerations of the classification and distribution of artifacts, several aspects of the site stratigraphy provided a viable framework for analysis. Perhaps the most important of the insights gained from the stratigraphic sequence was the recognition that the majority of artifacts across the site were contained in a slightly darker, "midden" horizon. Artifacts in this horizon were almost exclusively referrable to the Alexander component at 22IT563. Above and below the midden zone artifact samples contained a higher frequency of materials (predominantly ceramics) traditionally assigned to components other than Alexander. However, even in the latter deposits Alexander materials (ceramics and projectile point/knives) predominate, thereby providing additional evidence of the primacy of the Alexander component. In order to facilitate manipulation of artifact samples from the site, three analytical units were recognized during analysis: Zone 1, which includes all levels above the midden horizon (surface to top of midden); Zone 2, the defined midden horizon; and Zone 3, all excavated levels below the midden (base of midden to base of excavations). While some mixing of materials is inherent in this scheme due to the use of arbitrary levels excavated into an approximate 10% slope, it is not considered to be of significance to an interpretation of site occupations. Clearly, the Aralia site is as close to the interpretation of a "single component" manifestation as can be expected on an open site in the Upper Tombigbee Valley.

In addition to collapsing vertical levels, different excavation units were also combined for purposes of the present analysis.

The combined units and their proveniences (Figure 6.2) are defined in Table 6.4. A complete distribution of material by excavation unit is provided in Appendix I and Supplements II and III of this report.

FEATURE CLASSES

Features encountered at the Aralia site have been classified into three types: Ceramic Cluster, Pits, and Other (Table 6.5, Figure 6.9). Ceramic clusters include Features 3-7, 16, and 17, each of which appears to represent a single, broken vessel. Features 12-15 are pits that appear to be natural in origin, while Features 8-9 are pits classified to be either cultural or natural in origin. Two features, Feature 10 and 11, are classified as Other. These features are separable by color and material content, but are horizontally and vertically an extention of the midden, Zone 2, the Alexander component. Feature designations 1 and 2 were assigned during the 1979 Alabama testing program (Bense 1979b) and were not reassigned during Phase I.

Feature Type 1: Ceramic Clusters

Feature 3

Feature 3 (centerpoint 74.37S/108.26W) is a ceramic cluster located in Block A. This ceramic concentration consisted of 11 Alexander Pinched sherds. Feature dimensions were 33 x 22 cm x 4 cm. The sherds were contained within a soil matrix of yellowish brown (10YR 5/4) sandy loam. Very faint, indistinct mottles in this matrix suggest that the cluster lies on or within Zone 2, the major Alexander component at the site. This proposition is supported by the stratigraphic location of the feature (Level 35-V) and by the temper and design motif of included sherds. All of the sherds in Feature 3 appear to be from the same Alexander Pinched vessel. The lack of evidence for a pit depression suggests that these sherds were deposited on a former living surface.

Feature 4

Feature 4 (centerpoint 76.60S/108.37W) is a ceramic cluster located in Block A. The dimensions of this feature are 20 x 25 x 1 cm. The cluster was contained within a soil matrix of dark brown (10YR 4/3-5/3) sandy loam. Since no pit ouline was discernible, it is inferred that the sherds were deposited on a

former living surface. Three of the four sherds, all Eroded Sand Tempered, appear to be from the same vessel. Also included with the sherds in Feature 4 was one nonutilized 0.50-inch flake. The stratigraphic location of the cluster (Level 36-VI), the tempering agent of the sherds, and the presence of one Alexander Pinched sherd indicate that this ceramic cluster is associated with the Alexander component.

Feature 5

Feature 5 (centerpoint 75.10S/108.42W) consisted of a ceramic cluster of 14 sherds contained within a dark brown (10YR 3/3) sandy loam soil matrix. Feature dimensions were 49 x 44 x 4 cm. The absence of a discernible pit outline suggests that these sherds were deposited on a former living surface. Six of the seven Residual Sand sherds represented in the feature belong to the same vessel. Other sherd types present include one Alexander Incised and Punctated, one Alexander Incised, and four Eroded Sand, all of which may be from the same vessel. One unidentified ground stone flake and two 0.50-inch flakes were also included as possible feature associations. The stratigraphic origination of Feature 5 (Level 36-VI) within Zone 2, as well as the presence of decorated Alexander ceramic varieties and the sand tempering of all sherds, strongly suggest a Gulf Formational (Alexander) affiliation for this feature.

Feature 6

Feature 6 (centerpoint 101.37S/103.20W) is a ceramic cluster located in Block B. The dimensions of Feature 6 were 33 x 22 x 4 cm. The cluster was contained within a dark brown (7.5YR 3/2) sandy loam soil matrix. No pit outline could be identified in association with this feature. Three of the recovered sherds were classified as non-diagnostic Residual Sand and four as Eroded Sand. All of the sherds may be from the same vessel. Sand tempering implies a Middle Woodland or Gulf Formational affiliation for this cluster. The stratigraphic location (Level 35-V) of Feature 6 further suggests an Alexander component affiliation.

Feature 7

Feature 7 (centerpoint 99.50S/103W) is a ceramic cluster located in Block B with dimensions of 9 x 11 x 4 cm. The feature was identified within a very dark grayish brown (10YR 3/2) sandy loam

soil matrix which did not show evidence of a pit outline. The recovered sherds appear to have been deposited on a former living surface. Six Alexander Pinched sherds, possibly from the same vessel, comprise the bulk of this feature. Two 0.25-inch flakes, one pebble, and one piece of ferruginous sandstone were located in close proximity to the sherds and were included with this feature. The temper and decorative motif of these sherds, as well as the stratigraphic location (Level 35-V) of Feature 7, indicate a Gulf Formational (Alexander) affiliation.

Feature 16

Feature 16 (centerpoint 84.70S/100.20W) is a ceramic cluster located in Test Unit 84S/100W. The dimensions of the feature were 83 x 43 x 7 cm. No pit outline was visible during excavation thus implying deposition of these sherds on a former living surface. Three Alexander Incised, two Alexander Pinched, five Alexander Incised/Pinched, and one Alexander Incised/Punctated sherds were recovered from the feature. All of the sherds appeared to be from the same vessel. During laboratory analysis an additional eight sherds recovered elsewhere in Unit 84S/100W and one sherd found in Unit 87S/110W were discovered to be part of the Alexander vessel recovered in Feature 16. Several other items in close proximity to the vessel fragments were excavated as part of Feature 16. These included the following: one Unidentified Chipped Stone, one Unidentified Ground Stone, one 0.50-inch flake, and 76 g of fire cracked chert. Stratigraphically, Feature 16 was located in Zone 2. Vessel decoration and temper further substantiate the Gulf Formational (Alexander) affiliation of Feature 16.

Feature 17

Feature 17 (centerpoint 79.36S/98.79W) was located in Test Unit 78S/98W. This ceramic cluster had dimensions of 34 x 16 x 4 cm and was contained within a soil matrix of dark brown (10YR 4/3) sandy loam mottled with yellowish brown (10YR 5/4) sandy loam. Feature 17 consisted of three sherds from a single Alexander Pinched vessel. Temper and decorative motif identify this feature with the Gulf Formational period, as does its location within Zone 2. The absence of a discernible pit outline suggests that the sherds were deposited on an existing surface. The location of the vessel fragments near the base of Zone 2, as opposed to the top of Zone 2, as is the case with other ceramic clusters at the site, offers the possibility of two occupation surfaces within this zone.

Feature Type 9: Pits

Feature 8

Feature 8 (centerpoint 100.30S/101.30W) is located in Block B and was partially removed during the 1979 Alabama Testing program. The remaining portion was excavated in 1980 and was designated Feature 8. This feature appeared to be a circular to oval shaped pit (plan view) with an irregular V-shaped cross section. Dimensions were 27 x 34 x 47 cm for the previously unexcavated portion of the feature. Feature 8, as first defined (Segment A), was comprised of dark brown (7.5YR 3/2) sandy loam mottled with white (10YR 8/2) and light yellowish brown (10YR 6/4) sand. The surrounding soils matrix was brown (10YR 6/4) sandy loam mottled with white (10YR 8/2) and light yellowish brown (10YR 6/4) sand. Segment B, the more deeply buried segment, was brown (10YR 4/3) sandy loam with large mottles or pockets of black (7.5YR 2.5/0) sandy silt loam. Charcoal flecks were scattered throughout both segments. Except for the lack of ceramic material in Segment B, the artifact distributions within the two segments were similar. Artifacts represented included an Alexander Pinched sherd, two grams of sherdlets, four grams of fired clay, one unidentified Ground Stone, and 25 pieces of debitage. Introduced Rock types within Feature 8 included 21 grams of pebbles/cobbles, one gram fire cracked chert, and 30 grams ferruginous sandstone. The presence of the Alexander Pinched sherd and the stratigraphic location of the feature within Zone 2 suggest Feature 8 is associated with the Alexander component. The function of this feature is uncertain. The V-shaped cross section did not appear to be of cultural origin and may represent a natural cut and fill. Thus the artifact content and the two strata indentified within the feature (Segments A and B) may be the result of either natural or cultural deposition, but the former is the favored interpretation.

Feature 9

Feature 9 (100.90S/100.65W) in Block B had an irregular, circular plan and a deep, basin-shaped cross section. Feature dimensions were 59 x 47 cm. The fill could be visually divided into two segments. The inner, irregular stain was a black sandy loam (7.5YR 2.5/0) flecked with charcoal. This was surrounded by a yellowish brown (10YR 5/4) sandy loam stain, which was also irregular in shape. The entire feature was contained within a soil matrix of dark yellowish brown (10YR 4/4) sandy loam mottled with light yellowish brown (10YR 6/4) and dark brown (10YR 6/3) sandy loam. Feature contents included 23 pieces of debitage, 24 grams of cobble/pebbles, one gram fire cracked chert, and nine grams ferruginous sandstone. No diagnostic artifacts were associated

with Feature 9. Stratigraphically, the feature appears to have originated in Zone 2 (Level 34-VII), suggesting an Alexander component affiliation. The derivation of this feature is problematical. The irregular shape may indicate a noncultural origin, although the contents of the feature could argue either for or against a cultural origin.

Feature 12

Feature 12 (centerpoint 98.84S/102.34W) is a pit with an irregular circular outline and a basin-shaped cross section located in Block B. The dimensions of the feature were 28 x 31 x 19 cm. The fill of Feature 12 was characterized by dark grayish brown (10YR 3/1) sandy loam mottled with black (7.5YR 2.5/0) charcoal stains. The feature was contained within a soil matrix of dark brown (7.5YR 3/2) sandy loam. No obvious artifacts were found in the pit, only Introduced Rock (3 grams of pebbles/cobbles) was recovered. Feature 12 was first observed near the middle of Zone 2 (Level 37-VII), the Alexander component. The outline and shape of the pit plus the apparent lack of cultural material suggest the feature had a noncultural origin.

Feature 13

Feature 13 (centerpoint 99.53S/106.27W) from Block B had an irregular, oval outline and an irregular, U-shaped cross section. The dimensions were 28 x 16 x 62 cm. The fill was a very dark gray (10YR 3/1) sandy loam containing charcoal flecks. The soil matrix was a dark reddish brown (5YR 3/2) sandy loam mottled with brownish yellow sandy loam. The artifactual material recovered was limited to seven pieces of debitage. Introduced Rock was present with six grams of pebble/cobbles, one gram of fire crack chert, and eight grams of ferruginous sandstone. Feature 13 was first observed, stratigraphically, near the top of Zone 2 (Level 38-III), the Alexander component. However, the feature's plan, cross section, and low artifact yield probably indicate a noncultural origin.

Feature 14

Feature 14 (centerpoint 110.11S/99.35W) was an irregularly-shaped pit found in Shovel Trench 5 during initial stratigraphic investigations at 22IT563. This feature included an irregular stain, partially removed during general excavation (Segment A); a smaller, oval stain (Segment B); and a narrow passage connecting

the two (animal burrow or root). In cross section Feature 14 was a wide, irregular U-shaped basin. The dimensions could not be determined with any certainty. Segment A was a very dark gray (10YR 3/1) loamy sand flecked with charcoal. Segment B was a dark yellowish brown (10YR 4/4) loamy sand mottled with very dark gray (10YR 3/1) loamy sand. One 0.25-inch flake was recovered from Segment A, along with one gram of pebble/cobbles. No artifacts or Introduced Rock were recovered from Segment B. Feature 14 was identified, stratigraphically, in Zone 2. However, the minimal cultural content and irregular plan and cross section suggest that the feature has a natural origin.

Feature 15

Feature 15 (centerpoint 110.23S/97.22W) was a circular- to oval-shaped pit with a basin-shaped cross section. Located in Test Unit 109S/97W, the feature had dimensions of 36 x 25 x 10 cm and was composed of two overlapping circular segments (A and B). Segment A was a dark brown (10YR 3/3) loamy sand mottled with yellowish brown (10YR 5/6) loamy sand. Segment B was a very dark grayish brown (10YR 3/2) loamy sand mottled with dark brown (10YR 3/3) and yellowish brown (10YR 5/6) loamy sand. The soil matrix surrounding the feature was a yellowish brown (10YR 5/6) loamy sand mottled with brownish yellow (10YR 6/6) loamy sand. Feature 15 was located at the base of Zone 2 (Level 40-XI) and appeared to be affiliated with the Alexander component. However, the outline, cross section, and absence of cultural material suggest that this feature was most likely of natural origin.

Feature Type 15: Other

Feature 10

Feature 10 (centerpoint 76.44S/110.40W) was a dark organic stain first encountered in the original, unexpanded Block A 4 x 4 m excavation unit. At that time, Feature 10 was thought to be a refuse pit. When the large areal extent of Feature 10 became obvious, extensions were made to the west and south of the 4 x 4 m unit. For purposes of control, all portions of the feature outside the original unit were removed in 1 x 2 m x 10 cm levels and labeled as Feature 10 arbitrary segments. The eastern boundary of Feature 10 was exposed in the original 4 x 4 m unit, the northern edge in a 1979 test unit, and the southern periphery in a 1 x 4 m extension of Feature 10 adjoining the southern wall of the Block A 4 x 4 m unit. Despite a six meter western extension of Block A, no western boundary of Feature 10 was encountered during excavation. Dimensions of the exposed portion of the

feature were 6.88 x 5 m with an average thickness of 30-40 cm and a volume of 4,728 liters of fill.

The fill of Feature 10 was a moderate to heavily compacted dark yellowish brown (10YR 4/4) sandy loam mottled with yellowish brown (10YR 5/4) sandy loam (Figure 6.7). Some slight variation in color did occur horizontally within the confines of the feature. The convoluted surface attests to the movement of water on the surface of and within the feature. Additional evidence of the post-depositional disturbance of this feature occurs in the form of extensive leaching indicated by mottling colors and the presence of water-lain deposits appearing as thin lamina. Feature 10 generally is surrounded by a matrix of yellowish brown (10YR 5/4) sandy loam mottled with dark yellowish brown (10YR 4/4) sandy loam.

An examination of the stratigraphic profile of Block A and its extensions reveals that in thickness, slope of deposit, and texture, Feature 10 is part of the entire Zone 2 horizon. It appears to be an intensely organic, roughly circular portion of Zone 2. Additional discussion of Feature 10 is included in later sections of this report.

Feature 11

Feature 11 (centerpoint 100S/103.30W) was initially encountered in the western portion of the Block B 4 x 4 m excavation unit. At first this dark stain was treated as a large pit. However, the depth, size, and complicated stratigraphy indicated a phenomenon similar to Feature 10 was present of the southern margin of 22IT563. An extension of eight meters was added to the western edge of Block B to isolate the downslope edge of the feature. Control was established by removing the extension in 1 x 2 m x 10 cm levels, designated as Feature 11 arbitrary segments. Only an eastern boundary was firmly established for Feature 11, although a possible northern boundary may have been present within Shovel Trench 4. Dimensions of the exposed portion of Feature 11 were 4 m x 7.6 cm with an average thickness of 30 cm and a volume of 6,895 liters of fill.

Feature 11 was generally characterized by very dark grayish brown (10YR 3/2) sandy loam surrounded by a matrix of dark brown (10YR 3/3) to dark yellowish brown (10YR 4/4) sandy loam. Feature 11 exhibited convoluted and strongly leached upper and lower boundaries. The feature also contained numerous silty lamina attesting to the presence of water-lain sediments in the deposit. Contained within Feature 11 were five areas of disturbance, Segments A-E. These intrusions were clearly defineable from the general feature fill based on color and textural differences.

Segment A, the largest disturbance, revealed a variety of bands and the mixing of feature fill with yellowish brown (10YR 5/6) sandy subsoil. Segments C-E were similar, although they contained less subsoil mixing. Segment B, which had the most homogeneous fill of any of the intrusions (very dark brown; 7.5YR 3/2-2/10), as well as the most regular shape, may have been an aboriginal pit included within Feature 11.

The stratigraphic profile of Feature 11, when compared with Zone 2 in Block B, indicated that in stratigraphic location, slope of deposit, and texture, Feature 11 was a continuation of that zone. Only the dark, organically rich matrix and compact nature of Feature 11 set it apart from remaining portions of Zone 2 during excavations. Additional discussions of Feature 11 are included in later sections of this report.

ARTIFACT CLASSES

The classification of artifacts from 22IT563 was conducted in two stages. All artifacts were initially segregated into descriptive categories as defined in Chapter 4 and Appendix IV (Laboratory Manual). Following completion of excavations at the site, a second examination of artifact categories was undertaken in order to refine the classification of materials. This latter analysis focused on the attributes of form, technology, and use, primarily within chipped and ground lithic implement categories. Time limitations did not permit an exhaustive secondary review and evaluation of all artifact categories. Therefore, an emphasis was placed on those categories that could not be easily interpreted from an examination of the laboratory manual, such as projectile point/knives and bifaces. Thus the artifact categories described below are weighted in favor of materials considered to be most conducive to preliminary interpretation.

While some uneveness in the categories presented is apparent, information is available to make a preliminary assessment of the nature and composition of artifact assemblages and cultural activities at 22IT563. The provenience and classification of all cultural material recovered from the Aralia site are presented in Supplements 2 and 3 to this report. Distribution of this material by Block/Unit and Level is contained in Appendix I. This section of the report provides summary descriptions by artifact class, type, and category. In addition, pertinent observations will be made when necessary to the understanding of the classification unit.

Ceramics

The following discussion divides the ceramic inventory from the site into major temper categories based on the ceramic analysis outlined in the Laboratory Manual. Qualitative and quantitative data concerning specific ceramic types are presented under individual temper headings.

Grog Tempered

A total of 47 grog tempered sherds was recovered. These consisted of 28 Baytown Plain and 19 Eroded Grog sherds. This group probably represents a small Baytown component (Miller III).

Limestone Tempered

A total of 9 limestone tempered sherds was found on 22IT563. The categories included are: three Mulberry Creek Plain, two Long Branch Fabric Marked, and two Eroded Limestone. The limestone tempered wares may represent trade with the Middle Tennessee Valley during early Miller I or Miller II times. However, it is difficult to assign a temporal placement to these ceramics in view of the limited numbers of sherds represented.

Sand Tempered

A total of 2,776 sand tempered sherds is represented in the sample. This is the most abundant temper grouping. The sand tempered wares may be divided into two major series: the Woodland Miller Series (Jennings 1944) and the Late Gulf Formational Alexander Series (Jenkins 1981). A large proportion of the sand tempered grouping could not be assigned to either of the above series as many sherds were eroded and because the plain wares for each series are virtually impossible to sort.

Miller Series: A total of 10 Furrs Cordmarked sherds could definitely be assigned to the Miller I or II series.

Alexander Series: A total 1,112 sherds could be assigned to the Alexander Series. They include one Smithsonia Zone Stamped, 264 Alexander Incised (Figures 6.10-6.12), 691 Alexander Pinched (Figures 6.13 and 6.14), 38 Alexander Incised/Pinched (Figure 6.15), 49 Alexander Incised/Punctated (Figures 6.15-6.17), and 69 Columbus Punctate (Figure 6.17). This ceramic assemblage is one of the few relatively intact, large assemblages reported in the

area. It may represent an early Henson Springs subphase, based on the higher frequencies of Alexander Pinched and Columbus Punctate than Alexander Incised and the virtual absence of Smithsonia Zone Stamped.

Miscellaneous: In addition to the Miller and Alexander Series ceramics, some 1,854 sand tempered sherds were recovered. These consist of 1,412 Eroded Sand, 434 Residual Plain Sand, and 8 Sand Other sherds. Because the tempering of these sherds is found in both Miller and Alexander contexts, they are difficult to sort into either series.

Fiber Tempered

A total of 9 fiber tempered sherds was recovered: one Wheeler Plain, two Eroded, and 6 Fiber Other. The fiber tempered ceramics probably represent a small Wheeler component.

Sherdlets

Included in this category are 2,654 grams of sherdlets (ceramic fragments that passed through 0.5-inch mesh hardware cloth). They represent most of the major temper groupings found at the site. Most of these sherds were eroded.

Fired Clay and Daub

A moderate amount of fired clay (547 g) was recovered during the excavations at 22IT563. This consisted of amorphous fragments of orange-black burned clay silt or silt loam. In addition to fired clay, three grams of daub were recovered from various contexts.

Distribution of Ceramics by Zone

Zone 1: In addition to the dominant Alexander ceramics, the majority of the late-dating ceramics from the site were found in this zone with the exception of 32 Baytown sherds found in Zone 2. The Baytown sherds may have been included in an unidentified feature in Block B. The Zone 1 ceramic sample included Alexander Series sherds mixed with small numbers of Baytown and early Miller I ceramics.

Zone 2: Few of the late ceramic types (Baytown, Miller) were found in Zone 2 with the exception of the Baytown sherds mentioned above and several Wheeler sherds. The Alexander Series at

the site is represented by higher proportions of punctating (Alexander Pinched and Columbus Punctate) than incising (Alexander Incised). Smithsonia Zone Stamped is represented by only one sherd in this assemblage. Therefore, the ceramic sample from Zone 2 may indicate an early context for the Alexander component.

Zone 3: Only Alexander ceramics were identified in this zone.

Chipped Stone

Chipped stone artifacts dominate cultural materials recovered from the Aralia site. The categories described below represent the major implement and/or manufactured product classes at the site. Debitage categories have not been described here (see Laboratory Manual, Appendix IV) but are presented by size-grade category in the Block and Level distribution tables (Appendix I). All metric data are presented in the measurement catalog in Supplement 4, and material type information is presented in Supplement 3 of this report. In addition, a summary of the measurement and raw material type data will be presented in this section for chipped stone categories. A summary of recovered chipped and ground stone implements is presented in Table 6.6.

Projectile Point/Knives

Cotaco Creek n = 1 (Figure 6.18):

Material:
  Heated Camden 1

Metric Data: Table 6.7

Discussion: The single specimen in this category has a straight, faceted base which retains the original cortical surface. The base exhibits minor thinning along one face. The stem is expanding and shoulders are squared. Stem margins have been crushed. The specimen has a relatively broad blade with straight to excurvate blade margins. The tip is acute. Crushing, polish, and rounding are evident along the entire length of both margins suggesting use as a knife or scraper. This projectile point/knife has been reworked from a larger form. The cross section is plano-convex.

Flint Creek n = 98 (Figure 6.17):

Material:

Heated Camden	85	Unheated Camden	3
Ft. Payne	1	Unidentified Raw Material	3

Metric Data: Table 6.7

Discussion: As will be indicated in the description of Little Bear Creek projectile point/knives, the distinction between Flint Creek and Little Bear Creek forms is tenuous. Although both categories were retained during the Phase I analysis, these projectile point/knives in all probability represent varieties of a single type. Serration was not employed as a principal criterion for sorting these two forms. Specimens included in these two categories occur in similar stratigraphic contexts at 22IT563 with Flint Creek forms dominating the total projectile point/knives sample from the site. The possiblility that several varieties are present within the Flint Creek (and Little Bear Creek) category will require further examination of this and temporally-affiliated lithic samples from other Phase I sites.

The Flint Creek sample from 22IT563 includes expanding (50%), straight (42%), and asymmetrically stemmed (8%) forms. Basal margins are excurvate (41%), straight (35%), or asymmetrical (24%). Stem margins are usually crushed or abraded (77%). Cortical surfaces (cobble) are retained on the bases of 15% of the sample. An additional 46% have flattened or faceted bases which relate to the method of manufacturing hafting elements. The majority of Flint Creek projectile point/knives (93%) have proximal flake-blank orientations indicated by bases that have not been extensively thinned by a broad, flat facet. Shoulder treatment (n=92) ranges from asymmetrical (41%) to squared (29%), tapering (26%), or occasionally barbed (3%). Blade margins (n=69) are asymmetrical (52%), excurvate (30%), or straight (17%). Serrated edges are present on 32% of this sample. Over half (52%) of the examples in this category appear to be resharpened/reworked. Cross sections are biconvex (75%) or plano-convex (25%).

Gary n = 2 (Figure 6.18):

Material:
Heated Camden 2

Metric Data: Table 6.7

Discussion: Both specimens have contracting stems, straight bases (thinned on one example), and squared to slightly tapering

shoulders. Stem margins have been crushed. Blade edges are asymmetrical and relatively sharp on the one complete example. The tip is acute on one specimen while the second example is broken (diagonally) at mid-section. Cross sections are biconvex. These projectile point/knives exhibit minor retouch/reworking along blade margins.

Little Bear Creek $\underline{n}$ = 36 (Figure 6.17):

Material:

Heated Camden	27	Unheated Camden	3
Fossiliferous Ft. Payne	1	Tallahatta Quartzite	3
Pickwick	1	Unidentified	1

Metric Data: Table 6.7

Discussion: Little Bear Creek projectile point/knives are one of two dominant forms recovered from 22IT563, the other being Flint Creek. An examination of specimens included in these two forms revealed considerable overlap in both stylistic (macromorphology) and technological attributes. Moreover, there is some suggestion from this and related analyses of the Upper Tombigbee Valley collections that these forms are part of a point complex which most likely encompasses such forms as Baker's Creek, Cotaco Creek, Smithsonia, Kays Stemmed, and Mulberry Creek. Based on the present study and a review of projectile point/knife distributions at other Phase I sites, it is apparent that these forms overlap in time and span a period of both pre-ceramic (Late Archaic) and ceramic-bearing (Gulf Formational) occupations. Clearly, revised and consistently applied sorting criteria are required before further analysis of Little Bear Creek and Flint Creek projectile point/knives can be conducted. Separation of these two forms in the present study is based on a desire to examine each projectile point/knife category independently of the other. The assignment of a projectile point/knife to either category must be considered provisional at the present time pending further analysis.

The Little Bear Creek category is comprised of straight to slightly expanding stemmed specimens that have tapering to squared shoulders and ovate to triangular blade elements. Bases are straight (33%), excurvate (42%), or asymmetrical (25%), and generally exhibit some degree of thinning. Bases retain cortical remnants on 19% of this sample and 22% exhibit flat or faceted bases. Most examples (92%) apparently were manufactured on flakes (spalls) or split cobbles. Proximal flake-blank orientations (Binford 1963:210) predominate. Stem margins are usually crushed or abraded (94%). Blade margins (complete or nearly complete specimens) are asymmetrical (n=15) or excurvate (n=6). Tips are generally acute. Four specimens exhibit fine serrations along both blade edges. The majority of Little Bear Creek

projectile point/knives have been resharpened/reworked. Cross sections are biconvex (78%) and plano-convex (22%).

Mud Creek $\underline{n}$ = 1 (not illustrated):

Material:
Unheated Camden 1

Metric Data: (no measurements taken)

Discussion: The one Mud Creek projectile point/knife recovered from 22IT563 is lanceolate in outline, extensively resharpened/reworked, and has a poorly defined hafting element. The hafting element is defined by a slight constriction of the margins along the lower (proximal) one-quarter or one-fifth of the projectile point/knife. The base is asymmetrical and the stem has a bulbous shape. Stem margins have been slightly crushed or abraded. One shoulder on this specimen is more pronounced than the other as a result of resharpening/reworking. Blade margins are asymmetrical and sinuous. The cross section is biconvex. This specimen most likely was used as a cutting implement.

Residual Stemmed $\underline{n}$ = 10 (Figure 6.18):

Material:

Heated Camden	7	Fossiliferous Bangor	1
Ft. Payne	1	Pickwick	1

Metric Data: Table 6.7

Discussion: This is a miscellaneous category for projectile point/knives that do not readily conform to one of the defined categories. The wide variety of morphologies represented in the Residual Stemmed category included several clusters based on hafting element form: two corner-notched/expanding stemmed, three straight stemmed, and three contracting stemmed. With the exception of three specimens, these projectile point/knives are fragmentary and, therefore, not amenable to further analysis. Assignment to new or existing type categories for any of these specimens will require additional analysis.

Wade $\underline{n}$ = 1 (not illustrated):

Material:
Heated Camden 1

Metric Data: Table 6.7

Discussion: The single specimen in this category has a broken tip and stem. The stem appears to be slightly contracting and stem margins are crushed. The stem fracture has produced an asymmetrical and faceted base and may have been intentionally manufactured. The shoulders are tapering and the blade is relatively broad. Blade margins are excurvate and finely serrated as a result of resharpening. The cross section is plano-convex.

Unidentifiable Projectile Point/Knife Fragments n = 144 (not illustrated):

Material:

Heated Camden	120	Unheated Camden	12
Ft. Payne	4	Fossiliferous Bangor	1
Pickwick	1	Tallahatta Quartzite	4
Unidentified	2		

Metric Data: (no measurements taken)

Discussion: Included in this category are the following unclassifiable projectile point/knife fragments: 66 tips, 27 midsections, and 51 stems.

Bifaces

Biface Blades n = 18 (Figure 6.18):

Material: (Table 6.8)

Metric Data: (Table 6.9)

Discussion: The biface blades included here exclude biface fragments and a single rehafted biface fragment which are described separately below. The biface blade category contains two general biface forms, ovoid and triangular. Each form has been divided into flake/other varieties including the three morphologies for triangular biface blades: Triangular, Narrow Triangular, and Expanding Triangular. Overlap exists between the Biface Blade varieties classified during analysis. Therefore, it remains to be demonstrated whether or not this classification scheme contributes to an understanding of chipped stone reduction strategies at the site.

The entire sample of Biface Blades from 22IT563 generally can be characterized as follows. Major thinning and shaping have been completed at this stage of reduction and most specimens only lack

preparation of hafting elements and final tertiary flake series to be "finished" projectile point/knife forms. Thinning has been accomplished either through flake removals that extend across each face or flake series that terminate near mid-line, thereby producing a pronounced ridge. The latter form occurs with greatest frequency in the Biface Blades sample. The occurrence of plano-convex cross sections (50%) and faceted proximal ends (56%) that sometimes retain cortical remnants indicate that flakes, and most likely split cobbles, were common starting points in the reduction system(s) represented by these materials. Very few of the Biface Blades (17%) appear to have been used as "finished" implements as suggested by tertiary flake series or obvious edge modification/attrition. Cross sections are evenly divided between biconvex and plano-convex.

Biface Blade Fragments $\underline{n} = 45$ (not illustrated):

Material:

Heated Camden	40	Unheated Camden	3
Ft. Payne	2		

Metric Data: (no measurements taken)

Discussion: This category includes the following unclassifiable bifacially flaked fragments: 34 distal, 7 medial, and 4 proximal.

Rehafted Biface Blade Fragments $\underline{n} = 1$ (not illustrated):

Material:
Heated Camden 1

Metric Data: Table 6.9

Discussion: This specimen appears to have an asymmetrical hafting element that has not been modified extensively beyond inital thinning. The lateral margins of the hafting element have been crushed/abraded. The blade margins are excurvate and finely retouched. Little or no attempt has been made to straighten the blade margins which have a twisted appearance. The tip is slightly rounded. The cross section is plano-convex. The specimen exhibits a proximal flake-blank orientation. Minor edge damage/attrition suggests that this specimen was used as a cutting implement.

Preforms

Preform 1 - Cobble n = 3 (Figure 6.18):

Material:
Heated Camden 2 Unheated Camden 1

Metric Data: Table 6.9

Discussion: The three specimens in this category, as well as the specimens in the two other Preform 1 categories, appear to represent early reduction stage materials. Cortex removal and preliminary thinning appear to be the major emphases at this stage of reduction. Cortical surfaces are retained at one end of the long axis on each specimen, thus indicating reduction from a cobble. Cross sections are biconvex. These specimens are generally ovoid in outline. No obvious evidence of use was noted.

Preform 1 - Flake n = 17 (not illustrated):

Material:
Heated Camden 16 Pickwick 1

Metric Data: Table 6.9

Discussion: These specimens are generally the same as the Preform 1 - Cobble described above with the exception of plano-convex cross sections indicating manufacture on a flake or split cobble. Most specimens (71%) retain patches of cortex on dorsal faces. Indications of use are limited to two specimens which may have been used as scraping implements.

Preform 1 - Indeterminate n = 15 (not illustrated):

Material:
Heated Camden 11 Unheated Camden 3
Conglomerate 1

Metric Data: Table 6.9

Discussion: These Preform 1's vary only slightly from the others. Although they are listed as indeterminate, both cobbles and flakes/split cobbles appear to be represented as the starting points for reduction. Cortex remnants are present on at least one face on 11 of the specimens. Cross sections are biconvex (67%) and plano-convex (33%).

Preform 2 - Flake n = 56 (Figure 6.18):

Material:

Heated Camden	11	Unheated Camden	2
Unidentified	2		

Metric Data: Table 6.9

Discussion: The Preform 2 categories (both Flake and Indeterminate) include specimens that have been more extensively thinned and shaped than in the Preform 1 categories, but not to the degree represented in the Biface Blade categories. As is the case with the Preform 1, both Preform 2 categories lack tertiary flaking.

This category includes specimens that generally exhibit plano-convex cross sections. Fewer specimens retain cortical remnants and when present (40%) they frequently occur along proximal margins. Obvious indications of use could not be discerned in this sample. Both triangular and ovate outlines are represented.

Preform 2 - Indeterminate n = 41 (not illustrated):

Material:

Heated Camden	3	Unheated Camden	6
Pickwick	1	Unidentfied	1

Metric Data: Table 6.9

Discussion: These specimens vary only slightly from the previous category of Preform 2 - Flake. Both cobbles and flakes/split cobbles are represented as starting points in the reduction system(s) included in this sample. Triangular and ovoid forms are present and most specimens lack obvious evidence of use. The edge dulling that occurs on approximately half of the sample is most likely the result of scrubbing to facilitate platform preparation rather than an indication of use.

Cores

180° Unifacial Adjacent Core n = 2 (Figure 6.18):

Material:
Heated Camden 2

Metric Data: Table 6.11

Discussion: This is a provisional category. Both specimens exhibit flake scars (adjacent) along one entire margin. Cobble

cortex is present on both examples. These may be bifaces, or in one instance bifacial debris, that were used as scrapers or gouges at this stage of reduction. One example has a U-shaped cross section, while the second specimen has a tabular cross section.

Core Fragments $\underline{n}$ = 13 (not illustrated):

Material:
Heated Camden 13

Metric Data: (no measurements taken)

Discussion: This is a provisional category that includes fragments of what have been interpreted as flake cores.

Scrapers $\underline{n}$ = 27 (not illustrated)

Material: (Table 6.10)

Metric Data: (Table 6.11)

Discussion: Included here are five categories of unifacial scrapers, scraper-like elements on a biface or core, notched flakes/spokeshaves, scraper fragments, and hafted end scrapers. The side, end, and combination side-end unifacial scrapers are characterized by one or more steeply beveled, modified edges. Most of the unifacial scrapers were manufactured on thin flakes that most likely could have been hafted. However, a preliminary examination of these specimens revealed no clear evidence of hafting. The unifacial scraper categories lack any well defined forms, thus suggesting that these were convenience implements manufactured without regard for formalized stylistic attributes.

The scrapers included in the Scraper on a Biface and Hafted End Scraper categories all appear to be modified hafted biface forms. Extensive rounding and polish on the three specimens in these categories is suggestive of uses as gouging and/or graving implements.

The single example of a Scraper on a Core is problematical. A small modified edge area on this split cobble specimen may represent use in heavy scraping (or planing ?) tasks.

The eight examples in the Notched Flake/Spokeshave category all have well defined U-shaped notches that are steeply beveled. Most of the notches are of relatively small size. These are thin flake tools that presumably were employed in fine woodworking tasks, or possibly in working bone or fibrous matter.

The final category, Unidentifiable Scraper Fragment, includes two miscellaneous examples that may represent sections of larger scraping implements.

Drills, Perforators, Etc. $\underline{n} = 46$ (Figure 6.19)

Material: (Table 6.12)

Metric Data: (Table 6.13)

Discussion: This general type includes several different styles (including fragments) of drilling, piercing, and routing implements, along with a single graver and a microlith that may have been part of a composite scraping or cutting implement. The shaft and stemmed drills along with the two reamers (recycled) present were manufactured on hafted bifaces (apparently Little Bear Creek/Flint Creek projectile point/knives). The two specimens included in the Expanding Base Drill category also may represent recycled hafted bifaces, although reworking has removed evidence of the original forms. Both rotary and piercing type use-wear is represented in the samples of drills, preforators, and reamers; these may be multipurpose implements or reflect different forms of use that cross cut specific artifact styles.

The microlith is the only unifacial implement included here; both the reamer and the graver in this sample have bifacially flaked projections manufactured on irregular-shaped flakes.

Other Uniface and Biface Tools $\underline{n} = 416$ (Figure 6.19)

Material: (Table 6.14)

Metric Data: (Table 6.15)

Discussion: The Other Uniface and Biface Tool type includes a wide range of implements and unidentifiable fragments that reflect a diversity of uses or functions. Preliminary descriptions of the major categories are provided below.

Knife forms are reresented by seven Uniface and six Biface Flake varieties, and a single Uniface Cobble knife. Modified edge characteristics on these specimens range from steeply beveled to thin and suggest that scraping as well as cutting implements may be represented in these categories. The Biface Flake knife category contains four specimens with spurs or projections suggestive of multipurpose implements or, possibly, alternative uses.

Single examples of a Biface Chopper and Chopper/Hammerstone, and a double-bitted chipped stone axe provide the only evidence of heavy chopping/cutting activities on the site.

Possible wood working implements are represented by two Biface Adzes, two Wedges, and a single Adze/Chisel, in addition to the double-bitted axe noted above. Also, the Wedges and a single Piece Esquille may have been used in working and/or splitting bone. The Adzes, Adze/Chisel, Wedges, and Piece Esquille all exhibit edge damage in the form of stepped flake scars and/or crushing along two opposing margins. These specimens appear to have been used in conjunction with a hammer, thereby producing some degree of edge attrition on the two opposing margins. A microwear analysis of these implements and the knife forms of this tool type may provide additional insights or refinement of the implement uses represented.

Ground Stone

A wide variety of artifact forms are included under the Ground Stone heading. Although only preliminary descriptions of Ground Stone categories and items can be offered at this time, most recovered froms are well known throughout the southeastern U.S., as well as the Upper Tombigbee Valley. A summary of the Ground Stone implements recovered from 22IT563 is provided in Table 6.16.

Ground Stone $\underline{n} = 145$ (Figure 6.19)

Material: (Table 6.16)

Metric Data: (Table 6.17)

Discussion: Included under the heading of Ground Stone are Hammerstones, Pitted Anvilstones, Mullers, Mortars, a Bead, Ground Limonite and Hematite, Unidentified Ground/Polished stone fragments, and Ground flakes. The eight Hammerstones are moderate to small sized cobbles that exhibit battering/crushing along one or more margins. Six of these have generally ovoid outlines. The remaining two have long, narrow eliptical outlines. Although several uses may be represented by the sample, these appear to have been used primarily as fabricating implements.

The Pitted Anvilstones recovered at the site are moderate sized, tabular sandstone cobbles that have small U-shaped pits or depressions on one or both faces. The depressions have been pecked. The depression on one face of a single specimen in this category is broad and only slightly concave, suggesting that it may have been used as a small mortar or palette. The entire cir-

cumference of each example has been roughened through pecking and flaking. These most likely were multipurpose implements.

The Muller category is comprised of three tabular sandstone cobbles that exhibit at least one ground face or edge. The single example that has rounding and polish present along the edge is fragmentary. The two remaining specimens have been roughened (pecked) along the entire margin. These were apparently used as grinding implements.

The Mortar category includes three moderate to small and one large tabular sandstone cobbles or fragments. One face on each example is slightly concave and this depression is rounded and smoothed as a result of grinding. The small size of three examples would not have permitted grinding of large substances.

A single tubular Bead recovered during the excavations was drilled from both ends. The bead was manufactured from a blank of ferruginous sandstone.

The Ground Limonite and Hematite recovered from the site were most likely used as sources of yellow and red pigment or are fragments of larger ground stone items. All three specimens exhibit striae and polish on at least one face.

The remaining two categories, Unidentified Ground/Polished Stone Fragments and Ground Flakes (Other), include miscellaneous debris and waste materials from larger ground stone items.

Debitage

A total of 43,689 non-utilized flakes were recovered from the Aralia site. The distribution by block and zone is presented in Appendix I and by feature in Appendix II. From the distributional data, several patterns can be seen. First, the dominant lithic raw material type is Camden chert (N = 42,532 or 97.3%); the minority types include Sandstone (N = 349 or 30.2% of minorities) and Ft. Payne (N = 148 or 12.8% of minorities) as the most frequent. Second, 85.7% (N = 36,443) of the Camden flakes of all sizes are heated. Third, 85.2% (N = 37,232) of all debitage is contained in Zone 2, the midden zone.

The horizontal distribution of the debitage at the site showed several curious trends. These are listed below:

1. Block B had 2.05 times more debitage than Block A
2. Group 1 (78S/98W) had 2.16 times more debitage than Group 2 (109S/96W)
3. Test Pit A (76S/40W) had 3.13 times more debitage than any other test pit.

These patterns of debitage distribution indicate that lithic reduction activities took place in specific areas of the site. These areas include Block B, Group 1 and Test Pit A. This could indicate either activity areas or occupational areas within the site. The high amount of debitage in Test Pit A, over 5 m above the base of the site, points out that the sloping surface was no hinderance to occupation. Perhaps this indicates a reaction to past flooded conditions in the adjacent valley. As described previously, this particular area of the Upper Tombigbee Valley is extremely wet due to the presence of seep springs at the base of the valley wall.

Introduced Rock

A total of 94,868 g of unmodified rock was recovered at 22IT563. The distributional data is presented in Appendices I and II of this report. From this information it can be seen that Sandstone was the most abundant material (N = 52,789 g or 55.6%) followed by Cobble/Pebbles (N = 33,794 g or 35.6%). The next most frequent were Fire Cracked Chert Chunks (N = 3,486 g or 3.6%) and Petrified Wood (N = 1,624 g or 1.7%). A majority of the Introduced Rock at the site occurred in Zone 2, the midden zone (N = 56,646 or 62.9%).

The horizontal distribution of this material followed the pattern of debitage presented above. Specifically it is as listed below:

1. Block B had 2.4 times more Introduced Rock than Block A
2. Group 2 had 1.4 times more Introduced Rock than Group 1
3. Test Pits A and D had at least 3.1 times more Introduced Rock than Test Pits B and C.

With the exception of Test Pit D, the same inferences of site use can be made using this distribution of Introduced Rock. The presence of the relatively high amount of Introduced Rock in Test Pit D could indicate additional occupational activity.

One cautionary note should be made, however, concerning the amount of Introduced Rock. Sandstone and Cobble/Pebble (91.2% of group) naturally occur in the sediments that make up the site. The amount which was actually introduced to the site by former occupants is not known as no off-site sediments were excavated. The parallel patterns of both the Debitage and Introduced Rock, however, tends to indicate that the latter was used by the occupants and did not occur naturally.

Historic Debris

The sample of historic debris from 22IT563 appears to be almost entirely of recent origin. The materials presented in Tables 6.18 and 6.19 presumably relate to the use of the site as a dump by local residents. A review of the items represented indicates that in addition to household debris, a relatively large number of shell casings are present. The latter apparently indicates hunting/shooting activity at the site, as opposed to the dumping of these items. In general, the historic debris recovered from the Aralia site dates approximately to the past 30 years. Small dumps such as this are common phenomena throughout the Tombigbee River Valley.

BIOTIC REMAINS

Flora

A relatively diverse sample of floral remains was recovered from flotation samples at the Aralia site (Table 6.20). However, the interpretation of these materials is clouded somewhat by the identification of modern contaminants (predominantly uncarbonized specimens) in various contexts within the site (E. Sheldon: personal communication). Although it is unlikely that carbonized plant remains in this sample have been contaminated through the inclusion of recently carbonized specimens, this remains a possibility that will require further study.

Plant remains from the Aralia site are dominated by carbonized seeds. Identifiable seeds include examples of pokeweed, chenapods, persimmon, and grape, although the majority of this sample was unidentifiable. In addition to seeds, identified plant remains from the site include carbonized nutshells (genus *Carya*), carbonized acorn fragments (*Quercus*), and a single bean fragment. The latter specimen appears to be of recent origin. Wood samples are comprised of oak (*Quercus*), pine (*Pinus*), and examples of unidentified hardwoods.

The charring of plant remains effectively slows rates of decomposition in acidic environments like the Aralia site. However, the process of charring plant remains was probably selective, depending in part on cultural preferences in methods of food preparation, as well as secondary use and post-depositional influences. Therefore, the sample of plant remains recovered from the site represents, in all probability, a relatively small segment of the total plant resources utilized (Wing and Brown 1979:147).

The charring of the seeds, hickory nutshells, and acorn parts in this sample may have occurred either during processing (e.g., roasting), through secondary use as a fuel (nutshells), or accidentally after deposition. The roasting or parching of seeds to facilitate storage is well documented ethnographically and may account for the condition and preservation of this sample (B. Smith 1978:109; Yarnell 1964).

Hickory nuts were sometimes eaten raw by Southeastern Indians (Hudson 1976:301), but more commonly were pounded to extract oil from the nutmeats. Acorns were likewise pounded and boiled to extract the oil from the meal (Lawson in Swanton 1946:366). The meal was used to thicken venison broth or was eaten like a bread (Swanton 1946:366-367). Nutshells recovered from the Aralia site have been fragmented into small pieces, presumably as a result of pounding. Carbonization of nutshell fragments may have occurred after boiling when residue present in the bottom of cooking vessels was emptied into a fire (Lawson in Swanton 1946:365). Nutshell fragments may also have been collected and used for fuel.

The preliminary analysis of plant remains from 22IT563 indicates an economic reliance on gathered foodstuffs dominated by nuts and seeds. With the possible exception of one bean part, probably of recent origin, cultigens are not represented in the floral assemblage. The plant resources identified are common occurrences in the Tombigbee bottom today and presumably could have been obtained with little difficulty throughout most of prehistory.

It is possible with the available data to infer a subsistence base dependent upon the scheduling of gathering-hunting-fishing activities. The projected economy of the Alexander peoples at 22IT563 is comparable to subsistence strategies documented at a similar time depth in sites throughout much of this region and the entire southeastern U.S. (cf. Dye 1980; Morse 1967; Galm 1981). The origins of this pattern lie in the Archaic period and apparently continue with only minor changes until the widespread adoption of agriculture and an attendant shift in economic emphasis.

Indications of seasonality of the occupations represented in the plant remains at the site are restricted to the Fall. Nuts, acorns, and seeds were generally harvested during October and November (Hudson 1976; Swanton 1946). This is presuming, of course, that these archaeological samples reflect collection efforts occurring during occupation of the site and not long-term storage and transport. Evidence accumulated to date documents the Fall bias of plant assemblages collected from archaeological contexts (B. Smith 1978:151; Reidhead 1976). The underrepresentation of Winter-Spring-Summer occupations can be anticipated, as

can the absence of ma.y plant resources that are usually not preserved in archaological deposits (e.g., potherbs, fruits, berries). Therefore, while seeds and nuts were clearly important food recources during the Alexander occupations, their role in the overall economy of this component must be interpreted with some caution. The degree of emphasis placed on these resources during the Henson Springs phase would have depended upon, among other factors, seasonal availability and preferential selection.

Fauna

Faunal remains from 22IT563 are represented by a few very small and usually calcined fragments. Most of this sample is too fragmentary to permit positive indentifications. In view of the low numbers and small sizes, no further analysis of this sample has been conducted.

Osteological Remains

Human skeletal remains have not been identified from the Aralia site. It is possible that human remains are represented as small fragments included within unanalyzed faunal samples. However, no cemetery areas or burial pits were identified during excavations at the site.

DISCUSSION AND INTERPRETATION

SITE FORMATION

One of the more peculiar aspects of the Aralia site is its topographic position. The site is situated at the sloping base of the eastern valley wall. The present slope at and in areas adjoining the site approximates 10%. At the onset of investigations at the site, it was not clear whether the prehistoric occupants had settled on a sloping terrace or if these deposits were scoured following the occupations thus producing the present configuration. Subsequent examination of stratigraphic profiles revealed a slope of subsurface units toward the floodplain of up to 15%, confirming the former hypothesis.

The surface at the site and adjoining areas at the base of the eastern valley wall is part of an active erosional-depositonal zone. Active rivulet and channel cutting and the downslope movement of fine fraction sediments are prominent features of this environment. The toe of the slope on which the site is situated

revealed cut and fill deposits in cross section. These cut and fill sequences are attributable to the meandering of the Tombigbee channel; and, in all probability, the channel was active in this position during at least segments of the prehistoric occupations. The formation of a meander cusp, in conjunction with high water episodes and the existing slope, would have produced intermittent periods of elevated surface runoff, mass movement of sediments, localized scouring, and sediment deposition.

On-site stratigraphy is characterized by sandy, alluvial sediments inter-mixed with colluvium. Lamellae are common occurrences below approximately 60 cm and probably are associated with a perching of the water table. There is no evidence to suggest that these lamellae are cultural features or were produced in part through cultural activity.

The depositional record at 22IT563 documents periods of extensive erosion, colluvial deposition, and supersaturation and flooding produced by high water episodes of the Tombigbee River. These processes continue to affect the site environment to the present day and no doubt had a significant influence on prehistoric settlement of the eastern valley margins. There is, however, evidence to suggest that conditions were relatively stable during the span of the Alexander occupation. Perhaps the most important line of evidence is the cultural midden associated with the Hendson Springs component which dated to ca. 429 B.C. (see Table 6.20). The formation and preservation of this dark-colored midden implies that conditions during and immediately following the major occupation of the site were stable enough to promote repeated settlement. In addition, it is possible to infer rates of deposition of organic debris, presumably associated with subsistence activites, in quantities sufficient to produce elevated levels of organic matter content within the site area. Correspondingly, environmental conditions lacked the severity to disperse these culturally-derived organics, either through mechanical erosion or rapid leaching following chemical decomposition. The complex interplay of cultural and natural processes thus resulted in the formation of a midden horizon. The preservation of this midden through subsequent periods of occupation and abandonment may have been aided by deposition of a sediment cap comprised of colluvial, or possibly alluvial, materials which effectively sealed the midden zone.

Evidence of erosion and high water are indicated by cut and fill deposits and lamellae. These features are most apparent in strata below and above the midden horizon and associated stratigraphic units (Zone 2). This may be significant to an understanding of the relatively poor representation of pre- and post-Alexander components at the Aralia site. A major cut and fill deposit at the toe of the terrace may have destroyed evidence of prehistoric occupation(s) in this area. Excavations located in

proximity to this cut and fill (see Figure 6.2) yielded relatively limited amounts of cultural debris. Another factor of significance to this discussion is the presence of a road along the toe of the slope. Grading and general use of the road has destroyed the integrity of the uppermost strata further clouding attempts to identify prehistoric occupation of this downslope area. In all likelihood, the toe of the terrace did contain evidence of prehistoric settlement that was destroyed by scouring action of the river and recent upgrading of the access road. The recovery of 21 Wheeler sherds in the road during the 1979 investigations (Bense 1979b) provides the only indication of the temporal placement of occupations in this downslope position. It is noteworthy also that the position of the river in closer proximity to the eastern valley wall, as indicated by the cut and fill deposit along the toe of the slope, may correspond to the period of the Alexander occupation of the site. If so, this may have been an important factor in the selection of the site area for settlement.

COMPONENTS

The first indication of a major Alexander component at the Aralia site was provided during the initial testing phase conducted in 1979 (Bense 1979b). Preliminary analysis from the first excavation suggested this was a single component Alexander site. The extensive mixing of diagnostic artifact forms documented at most investigated sites in the Upper Tombigbee Valley was not as apparent at 22IT563. The present (Phase I) investigations at Aralia have provided stratigraphic evidence of the Alexander component and confirmed that this was indeed the major occupation.

The highest density of cultural materials recovered during the excavations were from the area designated Zone 2 within Feature 10 (Block A) and Feature 11 (Block B). Zones 1 and 3 within and outside of these features characteristically yielded lower artifact densities. Overall, the largest amounts of cultural debris were recorded within the horizontal area encompassed by the two large features (see Appendix II and Supplements 2 and 3). The distribution of artifacts within the three zones reveals the predominance of Alexander Series ceramics and Flint Creek/Little Bear Creek projectile point/knife forms, regardless of stratigraphic position. The concentration of diagnostic and nondiagnostic materials in Zone 2 corresponds to the placement of a dark-colored midden primarily restricted to Features 10 and 11.

Secondary occupations do appear to be represented at the Aralia site, although these are of limited interpretive value. Indications of components dating prior to and after the major Alexander component are provided by limited numbers of Wheeler,

Baytown, and Miller ceramics in identified samples from the site. However, the majority of the latter ceramics were recovered from the surface of the site (Bense 1979) or from disturbed contexts within the Block B excavation unit. The relatively few sherds assigned to the Wheeler Series, Baytown Plain, and the Miller Series do not exhibit well-defined stratigraphic distribution. Also, the possibility exists that the identification of Baytown Plain may be incorrect. This would not be surprising in view of the vagaries associated with the sorting of clay-tempered plain wares (cf. Phillips 1970:47-48), 162-163; Galm 1981). Other artifact forms associated with these cramics, such as Flint Creek/Little Bear Creek projectile point/knives, occur over too broad a temporal span to be useful as chronological indicators. Therefore, apart from noting their presence, little else can be said of these ceramics or the components they presumably represent. The focus of this section then is the Alexander component and its chronological position and cultural content.

A single radiocarbon date from the site is described in Table 6.20. The charred nutshells submitted for radiometric assay were derived from Zone 2, placing the major occupation at Aralia within the early Henson Springs phase (cf. Jenkins and Curren 1975:5-6). The 429 B.C. date is consistent with the predominance of Alexander Series ceramics and Flint Creek/Little Bear Creek projectile point/knives from Zone 2. In addition, a review of the ceramic sample indicates the poor representation of late-dating varieties of this series, such as Smithsonia Zone Stamped and Columbus Punctate. As suggested earlier, this may be evidence of an early subphase of the Henson Springs phase, although further documentation is clearly required.

The Zone 2 artifact assemblage is characterized by its relative homogeneity across the site. Alexander Series ceramics include pinched and incised varieties which constitute the majority of the decorated sherd sample. Eroded Sand tempered sherds comprise the majority of the overall ceramic sample. Lithic implements are dominated by complete and fragmentary Flint Creek/Little Bear Creek projectile point/knives. Other implements include relatively limited numbers of bifaces and cores, and a variety of preforms, scrapers, and drills-perforators-reamers. The sample of lithic implements contains a diversity suggestive of the performance of a wide-range of activities within the Henson Springs phase component. Although scrapers occur in a variety of styles, they are outnumbered by drill-perforators-reamers by a ratio of approximately 2:1. Early reduction stage lithic materials are not well represented within Zone 2 when compared to the large numbers of late-stage preforms and finished implements. Overall, chipped stone lithic debitage and implement samples reveal an overwhelming preference for heated Camden chert. Finally, ground stone implements are poorly represented in this collection. Included in this sample, however, are several examples of

Mullers, Mortars, Pitted Anvilstones, and a single, fragmentary Bead.

As noted above, a diversity of implement uses suggesting the performance of a wide range of activities is represented in the lithic assemblage at 22IT563. Documentation of specific implement uses is limited at present, but several observations can be offered at this time. First, the diversity in implement forms, when linked to activites or activity sets, is consistent with a use of the site as a base camp during the Henson Springs phase (cf. Klinger 1978). In addition, base camps are indicative, by definition, of semipermanent residency, although some movement of minimal population aggregates to other sites during portions of the year can be projected (Klinger 1978:290-293; Price and Krakker 1975:24-30). Secondly, the relatively low number of items in certain implement categories (e.g., ground stone, scrapers) is most likely a) an indication of the intensity of occupation(s), b) an indication of a limited number of intermittent, but semipermanent, occupations (combined in the classification of a single Henson Springs component), c) the representation of multipurpose tools in the Zone 2 assemblage, or d) combinations of the above. In short, low numbers of such items do not appear to be the result of differing activity patterns through time. Third, the projectile point/knife forms do, in fact, provide evidence of multiple uses (e.g., projectile, knives, drills/perforators). The presence of multipurpose implements in the assemblage obviates the need for other formalized styles of tools designed for specialized uses.

The artifact assemblage from the Aralia site is comparable to other Alexander components reported to date (Webb and DeJarnette 1942, 1948; Jolly 1971; DeJarnette et al 1975; see also Dye 1973; and Jenkins and Curren 1975). Missing, however, is the extensive mixing of ceramic types generally noted in Alexander components (DeJarnette et al 1975;32). Especially noteworthy in this regard is the poor representation of Wheeler Series and other Fiber tempered ceramics in this sample (n=9 and ca. 4 g of sherdlets). The Alexander Series ceramic assemblage, while dominated by undecorated sherds, contains a large enough sample of decorated sherds to conduct a detailed stylistic analysis (particularly the Zone 2 sample). Such an analysis would provide further documentation of the motifs represented during the early Henson Springs phase and would elaborate relationships to earlier- and later-dating ceramic complexes in the Upper Tombigbee Valley and surrounding region.

The lithic sample from 22IT563 provides further clarification of the stylisitc elements and the technological patterns in an assemblage from the Henson Springs phase. As indicated earlier, the Flint Creek/Little Bear Creek projectile point/knives in this sample are considered to be part of a projectile point/knife com-

plex associated with the Henson Springs phase. Although separated for descriptive purposes, these two forms clearly overlap in terms of stylistic attributes, size, and technology of manufacture. Attributes such as treatment of hafting elements and serration appear to be related to implement use. However, they were not employed as weighted sorting criteria during the classification of Flint Creek and Little Bear Creek projectile point/knives. Other projectile point/knives in the Aralia site sample include Cotaco Creek, Gary, Mud Creek, Wade, and Residual Stemmed forms, none of which occur with any frequency.

The remaining lithic implements, manufactural debris, and debitage, when combined with the projectile point/knife data, identify major stages in the manufacturing trajectory of the Henson Springs component. The vast majority of these tool types are comprised of locally-derived Camden cherts. Camden occurs as stream rolled cobbles which are readily available today throughout the Upper Tombigbee Valley. Cobbles of Camden chert are characterized by a distinctive, thick, chalky white to yellowish cortex. Interior chert colors range from off-white to mottled yellow and red. Most of the Camden sample from the site, as well as within Zone 2, appears to have been heated (Appendix I). Preliminary examination of lithic implements and debitage suggests that early-stage bifaces and possibly some unmodified cobbles were being thermally-altered prior to further reduction.

Early stages in the hafted biface reduction trajectory are represented by Preforms 1 and 2 in the present typological scheme. Primary and secondary decortication flakes produced by the reduction of cobbles to the preform stage do not appear to be well represented in debitage samples from the site. This suggests that at least some initial reduction took place at the sources of cobble supplies. The initial manufacturing sequence apparently involved both the bifacial reduction of cobbles and of large flakes derived from cobbles. The reduction of relatively large flakes, or possibly split cobbles, appears to be the favored starting point in the production of hafted bifaces in this sample. The initial thinning and shaping flake series are characteristically broad collateral removals that do not carry across midline. This results in a relatively thick cross section at midline. This attribute of manufacturing is represented throughout the reduction trajectory to the completed hafted biface.

More extensive shaping and minor thinning are reflected in the Biface Blade categories. Hafting elements are roughed out once general sizing/shaping and thinning work is completed. The preparation of hafting elements precedes the completion of final blade shaping and removal of tertiary flake series that produce regular, sharp blade margins. Attempts to thin the base do not occur at this stage of reduction, often resulting in the reten-

tion of a basal facet, frequently a cobble cortex remnant. The retention of flat, unthinned bases is evidence of an initial striking platform produced by a proximal flake-blank orientation. Flat or faceted bases, often consisting of cobble cortex, commonly occur in samples of Flint Creek and Little Bear Creek projectile point/knives (Jolly 1971:18; Cambron and Hulse 1975:51, 82). This is particularly true of samples derived from the Upper Tombigbee Valley including those described throughout this report. Of the sample of 98 Flint Creek projectile point/knives from this site, nearly half (46%) exhibit faceted or "unfinished" bases. The treatment of the base, when correlated to other attributes such as serration, may provide evidence of implement use(s). It is misleading and usually erroneous to conclude that Flint Creek/Little Bear Creek specimens with unthinned bases are unfinished, and therefore, unused.

This model of hafted biface manufacture is consistent with evidence from other excavated sites in the Upper Tombigbee Valley. Analyses of chipped stone technologies suggest correspondences between Alexander components and Initial Late Archaic period Benton components (ca. 5000-6000 B.P.). Chipped stone technologies represented during these two occupations exhibit similarities in the stages of manufacture that comprise the reduction trajectories, as well as similarities in the kinds of products and by-products manufactured. The similarities in methods of manufacture and stylization underscore possible cultural connections. As described herein, hafted biface production during the Henson Springs component at 22IT563 is a relatively brittle process not unlike the system represented in Benton components from the Upper Tombigbee Valley. Phase I excavations did not, however, provide sufficient evidence to document chipped stone technologies represented in Wheeler components, although there is little reason to suspect significant variation from the model presented above. The origin of this technological system may lie in Late Archaic manifestations located in the Tennessee River Valley, but appears to be best defined within Benton components of the period. While aspects of this system clearly change, the essential characteristics appear to be represented at least through the Henson Springs phase in the Upper Tombigbee Valley. The refinement and modification of this technological system are indicated by changes in the styles of final artifact forms and the selection of raw materials. However, such changes appear to be reflective of natural evolutionary processes rather than the wholesale alteration or replacement of the reduction trajectory. Moreover, as more data become available it is apparent that a similar continuity exists in the ceramic complexes of the Wheeler and Alexander cultures as identified in the Tennessee River and Upper Tombigbee Valleys. Relationships between these two regions appear to have considerable time depth, although the nature of interaction between peoples in these areas remains to be fully documented.

Among the many questions that require further research is the problem of clarifying settlement patterns in the Upper Tombigbee Valley during the Henson Springs phase. The Henson Springs component at 22IT563 appears to be part of an extensive settlement of the valley by Alexander peoples. However, until relationships to the Tennessee River and Central Tombigbee Valleys are more clearly defined, there remains the possibility that the Upper Tombigbee Valley was a marginal area situated between the major loci of cultural innovation and exchange during the Henson Springs phase.

ACTIVITIES AND SITE PATTERNING

The first stage in the analysis of artifact distribution at the Aralia site involved an examination of vertical concentrations of cultural materials. This resulted in the collapsing of arbitrary levels into the three analytical units, Zones 1-3, described earlier. This scheme reflects the concentration of cultural debris in the dark-colored midden, Zone 2, within and outside the two large features (10 and 11). These features have been interpreted as coeval segments of a discontinuous cultural midden. When combined, these two features encompass the majority of the excavated area at 22IT563. The tripartite stratigraphic division of the site had the advantage of minimizing analytical problems encountered in attempting to correlate materials excavated over a large area within steeply sloping (10-15%) strata. The correlation of relatively dark-colored stratigraphic units included within Zone 2 provided insights on the horizontal, as well as vertical, placement of areas most intensively utilized by the prehistoric inhabitants. In addition, the midden itself provided clues to the nature and intensity of the activities conducted by virtue of its preservation within the sandy, highly leached sediments that characterized the depositional sequence.

The cultural midden deposit at 22IT563 is best defined within the areas designated Features 10 (Block A) and 11 (Block B). Outside of these areas, excavations revealed a rapid reduction in the thickness of the midden and a gradational change to matrix colors of a lighter hue. In the excavation units placed furthest upslope no midden was encountered. Cultural debris, not surprisingly, occurs with greatest frequency within the midden features and adjacent sections (Zone 2). The Block A and B excavation units, therefore, comprise the two most significant cultural distributions at the site.

The artifact assemblages from Block A and B indicate possible differences in the kinds of activities conducted in each area. In general, the Block B excavation yielded higher frequencies of cultural materials than did Block A within Zone 2. Ceramic

counts from these two areas are nearly identical, although Block B (including Feature 10) reveals some mixing of diagnostic ceramic types. No such mixing is apparent in the Zone 2 assemblage from Block A. Lithic samples from the two blocks, however, provide evidence of significant differences in assemblage composition. There are larger numbers and a greater diversity of lithic implements in the Zone 2, Block B assemblage than the Zone 2, Block A assemblage. The Block B assemblage indicates an emphasis on maintenance/rejuvenation, with some secondary manufacturing activites. The horizontal concentration of debris in Block B suggests the presence of a lithic workshop area during the Henson Springs phase. By contrast, the Block A assemblage contains a wide range of artifact categories dispersed throughout which suggests a gradual accretion of debris during successive occupations.

The occurrence of the dark-colored midden in both major blocks implies the performance of extractive activities that resulted in the deposition of organic residue and activity-related artifactual debris. Further definition of the activities conducted within these two block excavation units will require additional analysis of artifact samples and attendant distributions.

One other area of the site containing a distribution of artifacts suggestive of specialized activity requires discussion. Excavation units incorporated in the designation Group 1 (see Figure 6.2; Table 6.4) include a disproportionately high number of projectile point/knives. A total of 46 complete and fragmentary specimens was recovered during excavation of these units. Of this number, 28 (62%) were classified as Flint Creek. Preliminary examination of this sample indicated multiple uses for these tools. It would appear, therefore, that more than one activity was associated with this concentration. Drilling, cutting, and projectile uses are reflected in this sample indicating extractive and fabricating activities, at a minimum, may have been conducted in this area. In addition, it is possible to suggest that some maintenance and/or rejuvenation of these implements is represented. This identifies yet another element in what most likely reflects an interrelated activity set. The midden horizon described in Blocks A and B is not present in this area suggesting it was not an intensive processing area for biotic resources.

No evidence of houses or burials was recorded during the excavtions or subsequent analysis. More detailed examination of artifact distributions may provide information on these feature types not available at this time. If the structural remains of houses are present at the site, it is possible to speculate that they will not be located within the midden horizons of Zone 2. The intensive extractive activities inferred from these midden deposits presumably were conducted outside of residences. Houses, if

present and identifiable, were probably located up or downslope from the primary activity and trash deposition loci at the site. By constrast, burials may be present, despite the lack of preserved bone, within these midden accumulations (cf. Galm 1981).

As indicated earlier, the Henson Springs component is interpreted as a base camp settlement. This interpretation is based on the diversity of implement forms represented in the Zone 2 assemblage, as well as the diversity of activities reflected in part by the presence of a culturally-derived midden horizon (cf. Klinger 1978). Settlement of the site during the Henson Springs phase was probably long-term, rather than seasonal, but intermittent. The time span of the occupations represented within Zone 2 is most likely no more than several hundred years based on the styles of artifacts represented. Components bracketing the Alexander (Henson Springs) occupation are represented, but appear to be of shorter duration and intensity. This may relate to short-term seasonal occupation of the site and/or the destruction of the principal areas of occupation.

Broader definition of subsistence/settlement patterns in the Upper Tombigbee Valley will require comparisons to other Henson Springs components in the area, as well as further analysis of the Aralia site data. The Aralia site constitutes one of the most important Alexander components reported to date from the mid-South region. As indicated in the foregoing discussion, the lack of extensive mixing of cultural debris contributes to the significance of the Aralia site, in part, by increasing the potential for further analysis. Completion of this analysis, therefore, should answer questions of local and regional importance not addressed in the present study.

Table 6.1. Site 22IT563: Classification of Soils from the Site and Vicinity.

Soil Series	Classification
Kirkville	coarse-loamy, siliceous, thermic Fluvaquentic Dystrochrepts
Manatachie	fine-loamy, siliceous, acid, thermic Aeric Fluvaquents
Smithdale	fine-loamy, siliceous, thermic Typic Paleudults

Table 6.2. Site 22IT563: Pedon Description of a Representative Profile.

Depth (cm)	Description (moist colors)
0-5	Very dark grayish brown (10YR 3/2) loamy sand; weak fine granular structure; very friable; many medium and small roots; abrupt smooth boundary.
5-10	Dark brown (10YR 3/3) loamy sand; weak fine granular structure; very friable; many medium and small roots; gradual wavy boundary.
10-20	Yellowish brown (10YR 5/4) loamy sand; weak fine granular structure; slightly firm in place, friable when disturbed; many medium and small roots; clear wavy boundary.
20-32	Dark yellowish brown (10YR 4/4) sandy loam; weak fine granular structure; friable; many medium and small roots.
32-67	Dark yellowish brown (10YR 3/4) sandy loam; weak fine granular; slightly firm in place, friable when disturbed; common fine roots; gradual wavy boundary.
67-85	Brownish yellow (10YR 6/6) loamy sand; single grain; loose; some sand stripping; few fine roots; gradual wavy boundary.
85+	Light yellowish brown (10YR 6/4) loamy sand; single grain; loose; common alternating yellowish brown and pale brown lamellae with some sand stripping.

Table 6.3. Site 22IT563: Particle Size Distribution and pH of a Representative Pedon.

Depth cm	Sand* %	Silt %	Clay %	Texture	pH
0-4	85.8	10.4	3.8	loamy sand	5.4
4-30	84.9	9.3	5.8	loamy sand	5.2
30-61	86.9	8.6	4.5	loamy sand	5.4
61-85	88.2	8.4	3.4	sand	5.4

* - Sand = 2-0.5 mm, Silt = 0.05-0.002 mm, Clay = §0.002 mm

Table 6.4. Site 22IT563: Definition of Analytical Units.

Analytical Unit	Provenience
Block A	74-88S/108-114W
Block B	98-102S/100-110W
Group 1	78-80S/98-102W
Group 2	109-11S/96-98W
Test Pit A	76.40-77.40S/87-88W
Test Pit B	84-86S/100-101W
Test Pit C	115-116S/87-88W
Test Pit D	78-79S/93-94W

Table 6.5: Summary of Feature Data

Feature Type	Feature Number	Block	Level Defined	Level Origin	Length	Width	Depth	Cultural Affiliation Comments
Ceramic Clusters	3	A	V[a]	V[a]	0.33	0.22	0.04	Alexander
	4	A	VI[a]	VI[a]	0.20	0.24	0.01	Alexander
	5	A	VII[a]	VI[a]	0.49	0.44	0.04	Alexander
	6	B	V[a]	V[a]	0.33	0.22	0.04	Alexander
	7	B	V[a]	V[a]	0.09	0.11	0.04	Alexander
	16	TP[d]	V[a]	V[a]	0.83	0.43		Alexander
	17	TP[d]	VIII[a]	VIII[a]	0.34	0.16	0.04	Alexander
Pits	8	B	VIII	VII	0.27	0.34	0.47	Unknown
	9	B	VIII	VII	0.59	0.47	0.42	Unknown
	12	B	VII	VII	0.28	0.31	0.19	Natural ?
	13	B	IV	III	0.28	0.16	0.38	Natural ?
	14	TR5[e]	?	?	0.28	0.30	0.14	Natural ?
	15	TP[d]	XI	XI	0.36	0.25	0.10	Natural ?
Other	10		V[b]	?	6.88	5.00	0.35[c]	Alexander
	11		V[b]	?	4.00	7.60	0.30[c]	Alexander

[a] *Only the below surface level designation employed at 22IT563 is given in this table.* See the Excavation Strategy section for a full explanation of the vertical control system.

[b] Because of the large aerial extent of Features 10 and 11 and the 10-12% slope of 22IT563 these are the average levels below surface that Features 10 and 11 began.

[c] These are average thicknesses for Features 10 and 11.

[d] Test Pit

[e] Shovel Trench 5

Table 6.6. Site 22IT563: Summary of Chipped and Ground Stone Tools.

Tool Class/Type	N
Projectile Point/Knives	
Cotaco Creek	1
Flint Creek	98
Gary	2
Little Bear Creek	36
Mud Creek	1
Residual Stemmed	10
Wade	1
Unid. Projectile Point/Knife Distal Frag	66
Unid. Projectile Point/Knife Medial Frag	27
Unid. Projectile Point Knife Proximal Frag	51
Total	293
Bifaces	
Ovoid Biface Blade - Flake	3
Ovoid Biface Blade - Other	2
Triangular Biface Blade - Flake	3
Triangular Biface Blade - Other	6
Narrow Triangular Biface Blade - Flake	1
Narrow Triangular Biface Blade - Other	1
Expanding Triangular Biface Blade - Flake	1
Expanding Triangular Biface Blade - Other	1
Biface Blade Proximal Fragment	4
Biface Blade Medial Fragment	7
Biface Blade Distal Fragment	34
Rehafted Biface Fragment (Recycled)	1
Total	64
Preforms	
Preform 1 - Cobble	3
Preform 1 - Flake	17
Preform 1 - Indeterminate	15
Preform 2 - Flake	15
Preform 2 - Indeterminate	41
Total	91
Cores	
Core Fragment	13
180° Unifacial Core	2
Total	15

Table 6.6 (cont.)

Tool Class/Type	N
Scrapers	
Uniface Side Scraper on Expanding Flake	1
Uniface End Scraper on Expanding Flake	3
Uniface Side-End Scraper on Expanding Flake	2
Uniface Side Scraper on Other Flake	4
Uniface End Scraper on Other Flake	3
Scraper on Biface Fragment (Recycled)	1
Scraper on Core (Recycled)	1
Notched Flake/Spokeshave	8
Unidentifiable Scraper Fragment	2
Hafted End Scraper (Recycled)	2
Total	27
Drills, Perforators, Etc.	
Shaft Drill	1
Expanding Base Drill	2
Stemmed Drill (Recycled)	8
Drill Fragment - Distal	16
Drill Fragment - Medial	12
Reamer	1
Graver	1
Microlith	1
Reamer (Recycled)	2
Perforator (Recycled)	2
Total	46
Other Uniface and Biface Tools	
Biface Chopper	1
Biface Adze	2
Uniface Flake Knife	7
Biface Flake Knife	6
Uniface Cobble Knife	1
Unidentifiable Chipped Stone Fragment	390
Other	1
Wedge	2
Chipped Axe	1
Chopper/Hammerstone	1
Burinated Biface (Recycled)	2
Adze/Chisel	1
Piece Esquille on Biface (Recycled)	1
Total	417

Table 6.6 (cont.)

Tool Class/Type	N
Ground Stone Tools	
Hammerstone	8
Pitted Anvilstone	3
Muller	3
Mortar	4
Bead	1
Ground Limonite	1
Ground Hematite	2
Unidentified Gound/Polished Stone Fragment	103
Other (Ground Flake)	20
Total	145

Table 6.7. Site 22IT563: Projectile Point/Knife Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Cotaco Creek				
WEIGHT	1	0	8.3	-	8.3	8.3	0	-
LENGTH	1	0	39.1	-	39.1	39.1	0	-
WIDTH	1	0	38.1	-	38.1	38.1	0	-
THK	1	0	7.2	-	7.2	7.2	0	-
BASLW	1	0	17.2	-	17.2	17.2	0	-
SHOULDRW	1	0	37.7	-	37.7	37.7	0	-
JUNCW	1	0	20.0	-	20.0	20.0	0	-
HAFTL	1	0	13.4	-	13.4	13.4	0	-
				Flint Creek				
WEIGHT	46	52	12.5	3.6	6.0	23.7	17.7	12.9
LENGTH	48	50	58.4	9.5	39.6	76.0	36.4	89.7
WIDTH	73	25	24.8	3.2	16.6	33.5	16.9	10.4
THK	75	23	10.2	1.3	7.4	13.2	15.8	1.8
BASLW	84	14	14.8	2.3	9.4	22.6	13.2	5.3
SHOUDLRW	82	16	23.9	3.4	14.3	35.9	21.6	11.8
JUNCW	90	8	15.0	1.5	11.4	19.2	7.8	2.3
HAFTL	83	15	12.1	1.6	8.9	17.1	8.2	2.6
				Gary				
WEIGHT	1	1	9.7	-	9.7	9.7	0	-
LENGTH	1	1	48.8	-	48.8	48.8	0	-
WIDTH	2	0	25.6	3.4	23.2	28.0	4.8	11.5
THK	1	1	9.0	-	9.0	9.0	0	-
BASLW	2	0	11.5	2.3	9.8	13.1	3.3	5.5
SHOULDRW	2	0	24.4	3.0	22.3	26.5	4.2	8.8
JUNCW	2	0	17.2	3.0	15.0	19.3	4.3	9.2
HAFTL	2	0	8.9	1.5	7.8	9.9	2.1	2.2
				Little Bear Creek				
WEIGHT	11	27	12.2	1.8	9.8	16.3	6.5	3.3
LENGTH	10	28	56.1	2.6	50.9	58.9	8.0	6.8
WIDTH	24	14	25.1	3.0	20.4	31.7	11.3	8.9
THK	20	18	9.8	1.1	8.4	12.2	3.8	1.1
BASLW	30	8	13.2	2.0	9.4	16.2	6.8	4.0
SHOULDRW	27	11	23.7	2.9	18.3	29.1	10.8	8.6
JUNCW	32	6	15.1	2.1	9.2	18.1	8.9	4.4
HAFTL	28	10	12.4	1.7	8.8	15.9	7.1	2.9

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Residual Stemmed				
WEIGHT	2	8	12.6	0.6	12.1	13.0	0.9	0.4
LENGTH	3	7	50.0	9.9	38.6	56.3	17.7	97.3
WIDTH	2	8	24.7	3.6	22.1	27.2	5.1	13.0
THK	7	3	8.3	1.4	5.6	10.0	4.4	2.0
BASLW	6	4	13.1	2.8	8.6	17.4	8.8	8.0
SHOULDRW	3	7	22.7	3.2	20.4	26.4	6.0	10.5
JUNCW	6	4	13.7	0.6	12.5	14.4	1.9	0.4
HAFTL	5	5	8.0	2.7	3.4	10.4	7.0	7.3
				Wade				
WEIGHT	0	1	-	-	-	-	-	-
LENGTH	0	1	-	-	-	-	-	-
WIDTH	0	1	-	-	-	-	-	-
THK	1	0	7.4	-	7.4	7.4	0	-
BASLW	0	1	-	-	-	-	-	-
SHOULDRW	0	1	-	-	-	-	-	-
JUNCW	1	0	18.4	-	18.4	18.4	0	-
HAFTL	0	1	-	-	-	-	-	-

Table 6.8. Site 22IT563: Frequency of Biface Blades by Raw Material Type.

Category	Heated Camden	Unheated Camden	Pickwick	Total
Ovoid Biface Blade - Flake	2	-	1	3
Ovoid Biface Blade - Other	2	-	-	2
Triangular Biface Blade - Flake	2	1	-	3
Triangular Biface Blade - Other	6	-	-	6
Narrow Triangular BB - Flake	1	-	-	1
Narrow Triangular BB - Other	1	-	-	1
Expanding Triangular BB - Flake	1	-	-	1
Expanding Triangular BB - Other	1	-	-	1
Total	16	1	1	18
Percentage of Total	88.9	5.6	5.6	100

Table 6.9. Site 22IT563: Biface Blade and Preform Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
			Ovoid Biface - Flake					
WEIGHT	3	0	18.8	6.5	11.6	24.2	12.6	41.9
LENGTH	3	0	59.1	9.4	49.5	68.3	18.8	88.6
WIDTH	3	0	29.7	5.6	25.5	36.0	10.5	30.9
THK	3	0	12.2	2.1	10.5	14.5	4.0	4.3
			Ovoid Biface - Other					
WEIGHT	1	1	26.0	-	26.0	26.0	0	-
LENGTH	2	0	65.9	6.7	61.2	70.6	9.4	44.2
WIDTH	1	1	35.3	-	35.3	35.3	0	-
THK	2	0	13.5	0.1	12.8	14.2	1.4	0.1
			Triangular Biface Blade - Flake					
WEIGHT	3	0	21.4	4.1	17.0	25.0	8.0	16.5
LENGTH	3	0	63.4	8.2	56.0	72.2	16.2	67.1
WIDTH	3	0	32.2	3.0	30.1	35.6	5.5	9.0
THK	3	0	11.7	1.3	10.6	13.1	2.5	1.6
			Triangular Biface Blade - Other					
WEIGHT	6	0	24.0	4.8	20.0	33.1	13.1	23.2
LENGTH	6	0	65.1	8.8	53.8	80.5	26.7	77.3
WIDTH	6	0	30.6	1.9	28.7	33.5	4.8	3.5
THK	6	0	13.1	0.7	12.2	14.2	2.0	0.4
			Narrow Triangular Biface Blade - Flake					
WEIGHT	1	0	28.2	-	28.2	28.2	0	-
LENGTH	1	0	71.1	-	71.1	71.1	0	-
WIDTH	1	0	29.7	-	29.7	29.7	0	-
THK	1	0	12.9	-	12.9	12.9	0	-
			Narrow Triangular Biface Blade - Other					
WEIGHT	1	0	13.8	-	13.8	13.8	0	-
LENGTH	1	0	61.4	-	61.4	61.4	0	-
WIDTH	1	0	25.6	-	25.6	25.6	0	-
THK	1	0	11.4	-	11.4	11.4	0	-

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
			Expanding Triangular Biface Blade - Flake					
WEIGHT	1	0	14.3	-	14.3	14.3	0	-
LENGTH	1	0	52.7	-	52.7	52.7	0	-
WIDTH	1	0	25.3	-	25.3	25.3	0	-
THK	1	0	10.7	-	10.7	10.7	0	-
			Expanding Triangular Biface Blade - Other					
WEIGHT	1	0	20.6	-	20.6	20.6	0	-
LENGTH	1	0	51.7	-	51.7	51.7	0	-
WIDTH	1	0	31.3	-	31.3	31.3	0	-
THK	1	0	11.3	-	11.3	11.3	0	-
			Rehafted Biface Blade Fragment					
WEIGHT	1	0	15.7	-	15.7	15.7	0	-
LENGTH	1	0	69.5	-	69.5	69.5	0	-
WIDTH	1	0	27.5	-	27.5	27.5	0	-
THK	1	0	9.4	-	9.4	9.4	0	-
			Preform 1 - Cobble					
WEIGHT	1	2	153.7	-	153.7	153.7	0	-
LENGTH	1	2	92.5	-	92.5	92.5	0	-
WIDTH	1	2	50.0	-	50.0	50.0	0	-
THK	1	2	33.4	-	33.4	33.4	0	-
			Preform 1 - Flake					
WEIGHT	3	14	23.6	14.3	7.7	35.3	27.6	203.5
LENGTH	3	14	49.3	12.1	35.6	58.4	22.8	146.3
WIDTH	3	14	32.1	8.0	23.1	38.2	15.1	63.3
THK	3	14	16.8	6.1	11.5	23.5	12.0	37.5
			Preform 1 - Indeterminate					
WEIGHT	2	13	147.4	123.5	60.0	234.7	174.7	15260.1
LENGTH	3	12	51.2	34.3	12.8	78.8	66.0	1175.4
WIDTH	2	13	47.4	16.8	35.5	59.3	23.8	283.2
THK	2	13	31.4	9.8	24.4	38.3	13.9	96.6

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
			Preform 2 - Flake					
WEIGHT	5	10	24.1	11.7	6.5	36.8	30.3	137.0
LENGTH	5	10	57.8	11.8	38.3	70.1	31.8	138.2
WIDTH	5	10	30.6	4.6	24.2	36.0	11.8	21.2
THK	5	10	14.9	5.4	8.1	23.1	15.0	28.8
			Preform 2 - Ideterminate					
WEIGHT	12	29	24.7	9.5	13.0	42.3	29.3	90.5
LENGTH	12	29	63.8	9.9	45.2	79.4	34.2	97.0
WIDTH	15	26	32.1	5.7	22.1	42.2	20.1	31.9
THK	15	26	15.1	3.4	10.3	19.7	9.4	11.2

Table 6.10. Site 22IT563: Frequency of Scrapers by Raw Material Type.

Category	Heated Camden	Unheated Camden	Total
Uniface Side Scraper - Expanding Flake	1	-	1
Uniface End Scraper - Expanding Flake	3	-	3
Uniface Side-End Scraper - Expanding Flake	2	-	2
Uniface Side Scraper - Other Flake	4	-	4
Uniface End Scraper - Other Flake	3	-	3
Scraper on Biface (Recycled)	1	-	1
Scraper on Core (Recycled)	-	1	1
Notched Flake/Spokeshave	7	1	8
Scraper Fragment	2	-	2
Hafted End Scraper (Recycled)	2	-	2
Total	25	2	27
Percentage of Total	92.59	7.41	100

Table 6.11. Site 22IT563: Scraper and Core Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Uniface Side Scraper								
WEIGHT	4	1	6.0	6.2	2.3	15.3	13.0	38.9
LENGTH	4	1	29.4	13.5	16.2	48.3	32.1	182.8
WIDTH	4	1	27.6	2.9	23.3	29.4	6.1	8.5
THK	4	1	8.6	4.6	4.8	14.8	10.0	21.4
Uniface Side-End Scraper								
WEIGHT	2	0	4.0	2.1	2.5	5.4	2.9	4.2
LENGTH	2	0	28.3	1.8	27.0	29.6	2.6	3.4
WIDTH	2	0	32.4	10.5	25.0	39.8	14.8	109.5
THK	2	0	5.5	0.2	5.3	5.6	0.3	0.0
Uniface Notched Flake Spokeshave								
WEIGHT	8	0	2.2	1.6	0.4	4.4	4.0	2.6
LENGTH	8	0	26.3	9.3	14.7	41.0	26.3	86.8
WIDTH	8	0	22.3	6.2	13.1	32.0	18.9	38.4
THK	8	0	4.1	0.9	2.9	5.5	2.6	0.8
Scraper Recycled								
WEIGHT	4	0	28.0	37.6	7.3	84.2	76.9	1412.1
LENGTH	4	0	46.0	11.3	37.3	62.5	25.2	127.6
WIDTH	4	0	28.8	12.6	19.2	47.3	28.1	159.4
THK	4	0	14.8	9.8	9.0	29.3	20.3	95.3
Uniface End Scraper								
WEIGHT	6	0	2.6	1.1	1.0	3.7	2.7	1.3
LENGTH	6	0	22.6	6.4	17.3	34.9	17.6	40.5
WIDTH	6	0	26.0	7.8	14.8	36.8	22.0	61.4
THK	6	0	4.9	1.0	3.4	6.0	2.6	1.0
180° Uniface Core - Adjacent								
WEIGHT	2	0	39.5	33.5	15.8	63.2	47.4	1123.4
LENGTH	2	0	57.3	16.3	45.7	68.8	23.1	266.8
WIDTH	2	0	32.6	6.6	27.9	37.2	9.3	43.3
THK	2	0	22.2	8.7	16.0	28.3	12.3	75.6

Table 6.12. Site 22IT563: Frequency of Drills, Perforators, Etc. by Raw Material.

Category	Heated Camden	Unheated Camden	Ft Payne	Tallahatta Quartzite	Total
Shaft Drill	-	1	-	-	1
Expanding Base Drill	2	-	-	-	2
Stemmed Drill (Recycled)	6	1	1	-	8
Drill Fragment	16	3	4	5	28
Perforator (Recycled)	2	-	-	-	2
Reamer	1	-	-	-	1
Reamer (Recycled)	2	-	-	-	2
Graver	1	-	-	-	1
Microlith	1	-	-	-	1
Total	31	5	5	5	46
Percentage of Total	67.39	10.87	10.87	10.87	100

Table 6.13. Site 22IT563: Drills, Perforators, Etc. Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
			Expanded Base Drill					
WEIGHT	2	0	4.4	0.2	4.2	4.5	0.3	0.0
LENGTH	2	0	43.0	7.4	37.7	48.2	10.5	55.1
WIDTH	2	0	16.8	2.0	15.4	18.2	2.8	3.9
THK	2	0	8.5	1.6	7.3	9.6	2.3	2.7
			Shaft Drill					
WEIGHT	1	0	8.1	-	8.1	8.1	0	-
LENGTH	1	0	61.8	-	61.8	61.8	0	-
WIDTH	1	0	12.8	-	12.8	12.8	0	-
THK	1	0	12.0	-	12.0	12.0	0	-
			Drill (Recycled)					
WEIGHT	5	3	8.5	3.7	2.9	13.3	10.4	13.7
LENGTH	4	4	71.5	13.3	57.4	86.3	28.9	177.1
WIDTH	8	0	22.2	3.4	16.5	26.4	9.9	11.7
THK	7	1	8.5	1.8	5.3	9.9	4.6	3.1
			Graver					
WEIGHT	1	0	1.6	-	1.6	1.6	0	-
LENGTH	1	0	28.5	-	28.5	28.5	0	-
WIDTH	1	0	11.8	-	11.8	11.8	0	-
THK	1	0	4.3	-	4.3	4.3	0	-
			Microlith					
WEIGHT	1	0	0.6	-	0.6	0.6	0	-
LENGTH	1	0	14.5	-	14.5	14.5	0	-
WIDTH	1	0	7.3	-	7.3	7.3	0	-
THK	1	0	3.6	-	3.6	3.6	0	-
			Perforator (Recycled)					
WEIGHT	1	1	8.8	-	8.8	8.8	0	-
LENGTH	1	1	35.3	-	35.3	35.3	0	-
WIDTH	2	0	26.7	1.7	25.5	27.9	2.4	2.9
THK	2	0	11.5	2.4	9.8	13.2	3.4	5.8

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Reamer								
WEIGHT	1	0	4.5	-	4.5	4.5	0	-
LENGTH	1	0	31.7	-	31.7	31.7	0	-
WIDTH	1	0	23.7	-	23.7	23.7	0	-
THK	1	0	7.3	-	7.3	7.3	0	-
Reamer (Recycled)								
WEIGHT	1	1	4.9	-	4.9	4.9	0	-
LENGTH	1	1	36.7	-	36.7	36.7	0	-
WIDTH	2	0	20.6	1.1	19.8	21.4	1.6	1.3
THK	2	0	9.4	0.1	9.3	9.4	0.1	0.0

Table 6.14: 22It563, Frequency of Other Uniface and Biface Tools by Raw Material Type

Category	Heated Camden	Unheated Camden	Fort Payne	Gray Buffalo River	Pickwick	Conglomerate	Quartzite	Tallahatta Quartzite	Ferruginous Sandstone	Siltstone	Unidentified	Total
Biface Chopper									1			1
Biface Adze	1								1			2
Uniface Flake Knife	7											7
Biface Flake Knife	5			1								6
Uniface Cobble Knife	1											1
Unid. Chipped Stone Fragment	331	38	5		2		2	2		1	9	390
Other											1	1
Wedge	2											2
Chipped Axe						1						1
Chopper/Hammerstone		1										1
Burinated Biface (Recycled)	2											2
Adze/Chisel	1											1
Piece Esquille-Biface (Recycled)	1											1
Total	351	39	5	1	2	1	2	2	2	1	10	416
Percentage of Total	84.38	9.38	1.20	0.24	0.48	0.24	0.48	0.48	0.48	0.24	2.40	100%

Table 6.15. Site 22IT563: Other Uniface and Biface Tools Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Uniface Flake Knife								
WEIGHT	6	1	8.6	5.2	1.1	15.6	14.5	26.5
LENGTH	6	1	30.3	15.5	6.5	46.0	39.5	240.6
WIDTH	6	1	29.4	8.7	13.0	36.6	23.6	74.8
THK	6	1	8.7	2.7	3.8	11.0	7.2	7.4
Uniface Cobble Knife								
WEIGHT	1	1	12.7	-	12.7	12.7	0	-
LENGTH	1	1	45.0	-	45.0	45.0	0	-
WIDTH	1	1	26.0	-	26.0	26.0	0	-
THK	1	1	12.0	-	12.0	12.0	0	-
Biface Adze								
WEIGHT	2	0	24.9	2.6	23.0	26.7	3.7	6.8
LENGTH	2	0	43.7	1.9	42.3	45.0	2.7	3.7
WIDTH	2	0	28.5	6.4	23.9	33.0	9.1	41.4
THK	2	0	18.2	0.3	18.0	18.4	0.4	0.1
Biface Axe								
WEIGHT	1	0	423.4	-	423.4	423.4	0	-
LENGTH	1	0	123.2	-	123.2	123.2	0	-
WIDTH	1	0	69.5	-	69.5	69.5	0	-
THK	1	0	42.2	-	42.2	42.2	0	-
Biface Chisel Adze								
WEIGHT	1	0	10.3	-	10.3	10.3	0	-
LENGTH	1	0	34.7	-	34.7	34.7	0	-
WIDTH	1	0	27.0	-	27.0	27.0	0	-
THK	1	0	11.5	-	11.5	11.5	0	-
Biface Chopper								
WEIGHT	1	0	459.1	-	459.1	459.1	0	-
LENGTH	1	0	124.3	-	124.3	124.3	0	-
WIDTH	1	0	87.3	-	87.3	87.3	0	-
THK	1	0	49.7	-	49.7	49.7	0	-

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Biface Hammerstone/Chopper								
WEIGHT	1	0	104.6	-	104.6	104.6	0	-
LENGTH	1	0	65.8	-	65.8	65.8	0	-
WIDTH	1	0	51.5	-	51.5	51.5	0	-
THK	1	0	36.3	-	36.3	36.3	0	-
Biface Flake Knife								
WEIGHT	5	1	18.2	9.7	3.1	29.2	26.1	93.7
LENGTH	5	1	56.7	12.3	36.7	68.8	32.1	151.6
WIDTH	5	1	37.9	8.3	30.5	52.0	21.5	68.8
THK	5	1	10.7	4.6	4.7	17.6	12.9	21.2
Biface Wedge								
WEIGHT	2	0	3.2	1.9	1.8	4.5	2.7	3.6
LENGTH	2	0	25.9	3.5	23.4	28.3	4.9	12.0
WIDTH	2	0	17.7	4.0	14.9	20.5	5.6	15.7
THK	2	0	6.9	0.9	6.3	7.5	1.2	0.7
Piece Esquille								
WEIGHT	1	0	4.0	-	4.0	4.0	0	-
LENGTH	1	0	33.0	-	33.0	33.0	0	-
WIDTH	1	0	15.8	-	15.8	15.8	0	-
THK	1	0	6.6	-	6.6	6.6	0	-
Burinated Biface								
WEIGHT	2	0	3.5	3.0	1.3	5.6	4.3	9.2
LENGTH	2	0	38.4	9.4	31.7	45.0	13.3	88.5
WIDTH	2	0	12.6	4.2	9.6	15.5	5.9	17.4
THK	2	0	6.5	1.1	5.7	7.2	1.5	1.1

Table 6.16: 22It563, Frequency of Ground Stone Tools by Raw Material Type

Category	Heated Camden	Unheated Camden	Conglomerate	Hematite	Limonite	Petrified Wood	Quartzite	Sandstone	Ferruginous Sandstone	Total
Hammerstone	2	2					2		2	8
Pitted Anvilstone									3	3
Muller									3	3
Mortar									4	4
Bead									1	1
Ground Limonite					1					1
Ground Hematite				2						2
Unid. Ground Stone Fragment			6	2		1		6	88	103
Ground Flake								4	16	20
Total	2	2	6	4	1	1	2	10	117	145
Percentage of Total	1.38	1.38	4/14	2.76	0.69	0.69	1.38	6.90	80.69	100%

Table 6.17. Site 22IT563: Ground Stone Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Pitted Anvilstone								
WEIGHT	3	0	440.4	160.0	318.7	621.6	302.9	25586.3
LENGTH	3	0	97.7	15.5	86.4	115.4	29.0	241.6
WIDTH	3	0	84.7	22.6	67.3	110.3	43.0	511.9
THK	3	0	34.2	3.8	30.9	38.4	7.5	14.6
Bead								
WEIGHT	1	0	5.6	-	5.6	5.6	0	-
LENGTH	1	0	32.1	-	32.1	32.1	0	-
WIDTH	1	0	12.4	-	12.4	12.4	0	-
THK	1	0	12.1	-	12.1	12.1	0	-
HOLEDIAM	1	0	5.6	-	5.6	5.6	0	-
Hammerstone								
WEIGHT	7	1	76.0	45.2	32.2	170.0	137.8	2042.3
LENGTH	7	1	58.9	9.9	51.4	79.0	27.6	97.1
WIDTH	7	1	37.7	8.9	25.6	48.2	22.6	79.2
THK	7	1	22.9	15.1	3.2	52.1	48.9	228.2
Mortar								
WEIGHT	4	0	201.2	70.1	147.1	302.3	155.2	4912.1
LENGTH	4	0	103.2	40.0	81.2	163.0	81.8	1596.0
WIDTH	4	0	82.8	31.8	61.3	129.0	67.7	1008.9
THK	4	0	18.1	3.6	14.3	22.3	8.0	13.1
Muller								
WEIGHT	2	1	315.3	130.3	223.1	407.4	184.3	16983.3
LENGTH	2	1	92.3	16.3	81.3	104.4	23.1	266.8
WIDTH	2	1	61.2	22.1	45.6	76.8	31.2	486.7
THK	2	1	33.7	6.7	29.0	38.4	9.4	44.2

Table 6.18: 22It563, Distribution of Historic Artifacts in Block A

Provenience	Level	Glass			Metal												Plastic	
		Clear Curved (Jug 1 Container?)	Clear Flat	Clear Molded (Soft Drink Bottle)	Aluminum Container Bottom	Metal Base, Pasteboard Container	Potted Meat Can	Potted Meat Can Lid	Can Key	Bottle Cap (Coke/Pepsi)	7d. Wire Nail	12d. Wire Nail	22 cal. Bullet	22 cal. Casing	Split Lead Fishing Line Sinker	Brass/Steel Composit Tool	Plastic 12 ga. Shot Container	Total
74S/108W	33-III		2													1		3
	34-IV		1															1
76S/110W	36-III		1															1
76S/111W	40-VII		1															1
76S/112W	39-II												1	2				3
76S/113W	40-I	1									1			1				3
	41-II	1											1					2
78S/109W	34-II	3																3
	35-III													1				1
78S/111W	37-I	1																1
78S/112W	38-I			5								1						6
	39-II			52													1	53
	40-III			5														5
78S/113W	40-I			2										1	1			4
	41-II			2	1									1				4
	42-III	1																1

Table 6.18 (Continued)

Provenience	Level	Glass			Metal												Plastic	
		Clear Curved (Jug 1 Container?)	Clear Flat	Clear Molded (Soft Drink Bottle)	Aluminum Container Bottom	Metal Base, Pasteboard Container	Potted Meat Can	Potted Meat Can Lid	Can Key	Bottle Cap (Coke/Pepsi)	7d. Wire Nail	12d. Wire Nail	22 cal. Bullet	22 cal. Casing	Split Lead Fishing Line Sinker	Brass/Steel Composit Tool	Plastic 12 ga. Shot Container	Total
80S/110W	36-II		3															3
	37-III		2															2
82S/110W	36-II		3			1		3		1								8
	37-III	2								2								4
84S/110W	37-II						1		1	1								3
86S/110W	37-II		3															3
Feature 10	39-V	2																2
Total		11	16	66	1	1	1	3	1	4	1	1	2	6	1	1	1	117

Table 6.19: Site 22It563, Distribution of Historic Artifacts in Block B

Provenience	Level	Glass	Metal						Miscellaneous			
		Clear Curved (Jug 1 Container?)	Galvanized Tinned Metal (Container?)	10d. Square Cut Nail	Cut Nail Fragment	10d. Wire Nail	¼-inch Hexagonal Nut	12 ga. Shotgun Shell	Brick Fragment	Riveted Leather Harness Fragment	Plastic 20 ga. Shotgun Shell Primer Casing	Total
98S/104W	34-II	1										1
	35-III	80										80
	36-IV	1										1
98S/105W	35-I	12					1					13
	36-II	16										16
	37-III									1		1
98S/106W	36-I										1	1
100S/100W	31-IV		5	1	2							8
100S/101W	33-VI			1								1
100S/102W	33-III							1				1
100S/104W	35-II	17				1						18
	36-III	1										1
100S/105W	35-I	24										24
	36-II	3										3
	37-II								10			10
100S/106W	36-I	3										3
	37-II	8										8
Total		166	5	2	2	1	1	1	10	1	1	190

Table 6.20: Distribution of Analyzed Floral Remains

SAMPLE			ANALYSIS DATA					
ID	PROVENIENCE	VOLUME (l)	TOTAL FLORA WT.[a] (g)	HICKORY NUT *Carya* spp.[b] (g)	ACORN *Quercus* spp.[b] (g)	SEED	WOOD[c] (g)	OTHER
1483C	BLOCK A UNIT:78S/110W Lev. 38 (IV) (89.30)	4.00	1.40	0.25	(3)[c] <0.05	4 spherical ($D^{d} \leq 1.00$mm)	1.30 ring-porous hardwood	
1515C	Lev. 39 (V) (89.20)	4.00	2.60	0.05	(3) <0.05	5 *Portulaca* 57 spherical ($D \leq 0.75$mm)	2.35 indeterminate wood	
1589C	Lev. 40 (VI) (89.10)	4.00	1.60	0.40	(2) <0.05	11 spherical ($D \leq 1.00$mm)	1.45 hardwood	
1638C	Lev. 41 (VII) Fea. 10 arb. seg. (89.00)	4.00	2.00	0.45	(7) <0.05	1 pigweed (*Chenopodium*) 1 stinging nettle seed? (*Urtica*) 15 spherical ($D \leq 1.00$mm)	1.65 ring-porous hardwood	
1682C	Lev. 42 (VIII) Fea. 10 arb. seg. (88.90)	4.00	1.50	0.45	0.05	10 spherical ($D \leq 1.00$mm)	0.90 hardwood	2 sugary substance? 7 exines?
1712C	Lev. 43 (IX) Fea. 10 arb. seg. (88.80)	4.00	0.90	0.25	(3) <0.05	1 grape (prob.) (*Vitis*) 8 spherical ($D \leq 1.00$mm)	0.75 indeterminate wood	2 exines, bark? 1 stem or peduncle?
2054C	Lev. 42 (VIII) (88.86)	4.00	1.00	0.40		29 spherical ($D \leq 0.75$mm)	0.65 indeterminate wood	5 indeterminates

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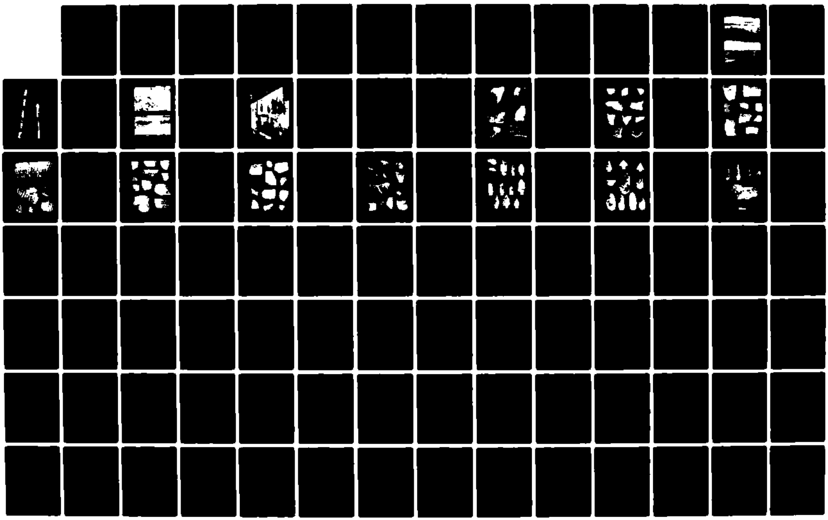
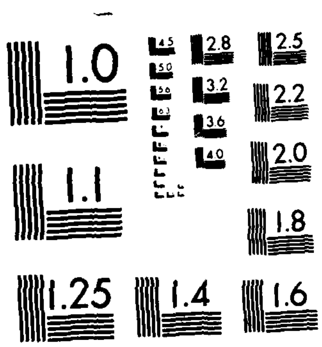




MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Table 6.20 (cont.)

SAMPLE			[illegible]					
ID	PROVENIENCE	VOLUME (l)	TOTAL FLORA WT.[a] (g)	HICKORY NUT Carya spp.[b] (g)	ACORN Quercus spp.[b] (g)	SEED	WOOD[b] (g)	OTHER
2088C	Lev. 43 (IX) (88.80)	4.00	0.50	0.20 (1)[c] nutmeat (prob.)	(4) <0.05	1 persimmon frag. (prob.) (Diospyros)	0.25 indeterminate wood	2 indeterminates
2095C	Lev. 44 (X) (88.70)	4.00	0.20	0.10		5 spherical (D ≤ 0.75mm)	0.30 hardwood	
2119C	Lev. 45 (XI) (88.60)	4.00	0.20	0.15		34 spherical (D ≤ 0.75mm)	0.10 indeterminate wood	2 indeterminates
123C	BLOCK A UNIT:74S/108W Lev. 34 (IV) (89.70)	4.00	7.40	(1)	(1)	2 Portulaca 13 yellow star grass (Hypoxis) 2 ellipsoid 2 angular ~375 spherical (D ≤ 1.00mm)	8.65 ring-porous hardwood and pine	
130C	Lev. 35 (V) (89.60)	4.00	1.30			1 Portulaca 1 yellow star grass (Hypoxis) ~100 spherical (D ≤ 1.00mm)	2.85 indeterminate wood	1 fruit?
173C	Lev. 36 (VI) (89.50)	4.00	0.90	(8) <0.05	(9) <0.05	31 spherical (D ≤ 1.00mm)	0.90 oak (Quercus)	
393C	Lev. 37 (VII) (89.40)	4.00	2.10	(1)	(28) < 0.05	11 spherical (D ≤ 1.00mm)	1.80 oak (Quercus)	

Table 6.20 (cont.)

SAMPLE			ANALYSIS DATA					
ID	PROVENIENCE	VOLUME (l)	TOTAL FLORA WT.[a] (g)	HICKORY NUT *Carya* spp.[b] (g)	ACORN *Quercus* spp.[b] (g)	SEED	WOOD[c] (g)	OTHER
731C	Lev. 38 (VIII) (89.30)	4.00	1.30	0.20	(8) $\leq$ 0.05	29 spherical (D $\leq$ 1.00mm)	1.25 ring-porous hardwood	
800C	Lev. 39 (IX) (89.20)	4.00	0.40	0.05	(3) $\leq$ 0.05	31 spherical (D $\leq$ 1.00mm)	0.45 gymnosperm and oak (*Quercus*)	
943C	Lev. 40 (X) (89.10)	4.00	0.10	(13) $\leq$ 0.05	(1) $\leq$ 0.05	1 spherical (D $\leq$ 1.00mm)	0.20 ring-porous hardwood and gymnosperm, resin	
2048C	Lev. 41 (XI) (89.00)	4.00	0.30	(6) $\leq$ 0.05	(2) $\leq$ 0.05	12 spherical (D $\leq$ 1.00mm)	0.25 pine	
2065C	Lev. 42 (XII) (88.90)	4.00	0.20	(4) $\leq$ 0.05		9 spherical (D $\leq$ 1.00mm)	0.10 pine, resin	
2093C	Lev. 43 (XIII) (88.80)	4.00	0.30	(3) $\leq$ 0.05		5 spherical (D $\leq$ 1.00mm)	0.15 indeterminate wood	
2110C	<u>BLOCK A</u> <u>UNIT:74S/108W</u> Lev. 44 (XIV) (88.70)	4.00	0.10			20 spherical (D $\leq$ 1.00mm) 1 ellipsoid, flat frag. ($\sim$1.75mm long)	0.20 pine, resin	
175C	<u>BLOCK B</u> <u>UNIT:100S/100W</u> Lev. 32 (V) (89.90)	4.00	2.45	(2) $\leq$ 0.05		1 *Portulaca* 4 yellow star grass (*Hypoxis*) 104 spherical (D $<$ 1.00mm)	2.10 ring-porous hardwood, pine, and resin	

Table 6.20 (cont.)

SAMPLE			ANALYSIS DATA					
ID	PROVENIENCE	VOLUME (l)	TOTAL FLORA WT.[a] (g)	HICKORY NUT *Carya* spp.[b] (g)	ACORN *Quercus* spp.[b] (g)	SEED	WOOD[c] (g)	OTHER
224C	Lev. 33 (VI) (89.80)	4.00	1.30	(4) $<$0.05	(5) $<$0.05	23 spherical (D $<$ 1.00mm)	1.10 indeterminate wood	
315C	Lev. 34 (VII) (89.70)	4.00	2.40	(41) 0.30	(11) $<$0.05	4 spherical (D $\leq$ 1.00mm)	2.00 indeterminate wood	
953C	Lev. 35 (VIII) (89.60)	4.00	1.90	(21) 0.30	(29) $<$ 0.05	18 spherical (D $\leq$ 1.00mm)	1.65 indeterminate wood	
1177C	Lev. 36 (IX) (89.50)	4.00	0.60	(17) 0.10	(10) $<$ 0.05	1 Fabaceae cotyledon 15 spherical (D $\leq$ 1.00mm)	0.50 ring-porous hardwood	1 exine?
1251C	Lev. 37 (X) (89.40)	4.00	0.20	(7) $<$ 0.05	(1) $<$ 0.05	1 spherical (D $\leq$ 1.00mm)		
1490C	UNIT:98S/106W Lev. 38 (III) (89.30)	4.00	2.30	(7) $<$ 0.05	(2) $<$ 0.05	43 spherical (D $\leq$ 1.00mm)	2.30 indeterminate wood	1 exine?
1550C	Lev. 39 (IV) (89.20)	4.00	1.90	0.75	(8) $<$ 0.05	1 *Portulaca* 1 angled ($\sim$1.00mm long) $\sim$285 spherical (D $\leq$ 1.00mm)	1.25 indeterminate wood and tiny concretions (D $<$ 0.50mm)	
1672C	BLOCK B UNIT:98S/106W Lev. 40 (V) Fea. 11 arb. seg. (89.10)	4.00	2.40	0.95	(3) $<$ 0.05	13 ellipsoid or spherical	1.55 indeterminate wood and concretions	

Table 6.20 (cont.)

SAMPLE			ANALYSIS DATA					
ID	PROVENIENCE	VOLUME (l)	TOTAL FLORA WT.[a] (g)	HICKORY NUT *Carya* spp.[b] (g)	ACORN *Quercus* spp.[b] (g)	SEED	WOOD[e] (g)	OTHER
1788C	Lev. 41 (VI) Fea. 11 arb. seg. (89.00)	4.00	1.90	0.55	(8) < 0.05	1 *Portulaca* (prob) 2 *Chenopodium/ Phytolacca* 49 spherical (D ≤ 1.00mm)	1.00 indeterminate wood and concretions	
1957C	Lev. 42 (VII) Fea. 11 arb. seg. (88.90)	4.00	0.80	0.10	(1)	1 spherical (D ≤ 1.00mm)	0.40 indeterminate wood and concretions	
2006C	Lev. 43 (VIII) Fea. 11 arb. seg. (88.80)	4.00	1.50	0.25	(4)	1 spherical (D ≤ 1.00mm)	1.00 indeterminate wood	

[a]Total carbonized botanical weight.

[b]All the carbonized botanical remains under the acorn and hickory columns are pericarp fragments unless otherwise specified.

[c]Numbers inside parenthesis under columns (whose weight is denoted by grams) indicate actual botanical count.

[d]D represents the diameter of the material.

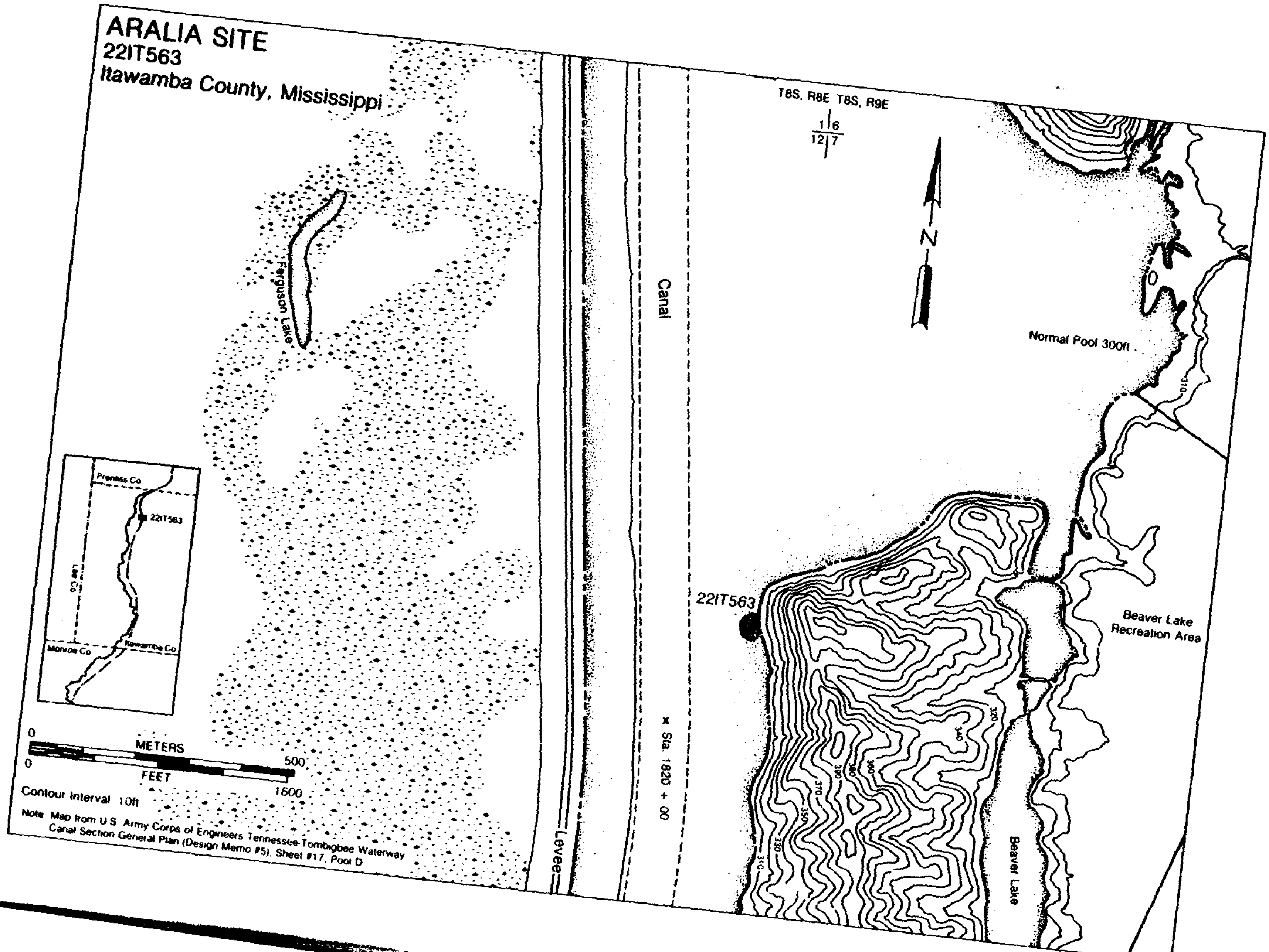
[e]Material listed under the wood column is not the actual total of wood recovered; it is mixed with other materials.

Table 6.21. Site 22IT563: Radiocarbon Assay.

Lab. No.	DIC-2037	Field No.	563-1930
T1/2 5568:	2310 ± 50		
T1/2 5730:	2379 ± 50		
Calendric date (uncorrected; T1/2 5730):			429 B.C.
(corrected; T1/2 5730):			429 B.C.
Sample:	Charred nutshells		
Provenience:	100S/107W, 43-VII (elev. 88.80-88.70)		
Comments:	This date places the major occupation (Zone 2) within the Henson Springs phase.		

Figure 6.1

Site 22IT563: General location map


ARALIA SITE
22IT563
Itawamba County, Mississippi
T8S, R8E T8S, R9E
1 6
12 7
N
Normal Pool 300ft
310
Beaver Lake
Recreation Area
Beaver Lake
320
340
360
380
390
370
350
330
310
22IT563
Canal
Sta. 1820 + 00
Levee
Ferguson Lake
Prentiss Co
22IT563
Lee Co
Monroe Co
Itawamba Co
0
METERS
500
0
FEET
1600
Contour Interval 10ft
Note Map from U.S. Army Corps of Engineers Tennessee-Tombigbee Waterway
Canal Section General Plan (Design Memo #5), Sheet #17, Pool D

6.17

Figure 6.2

Site 22IT563: Topographic map and excavation plan

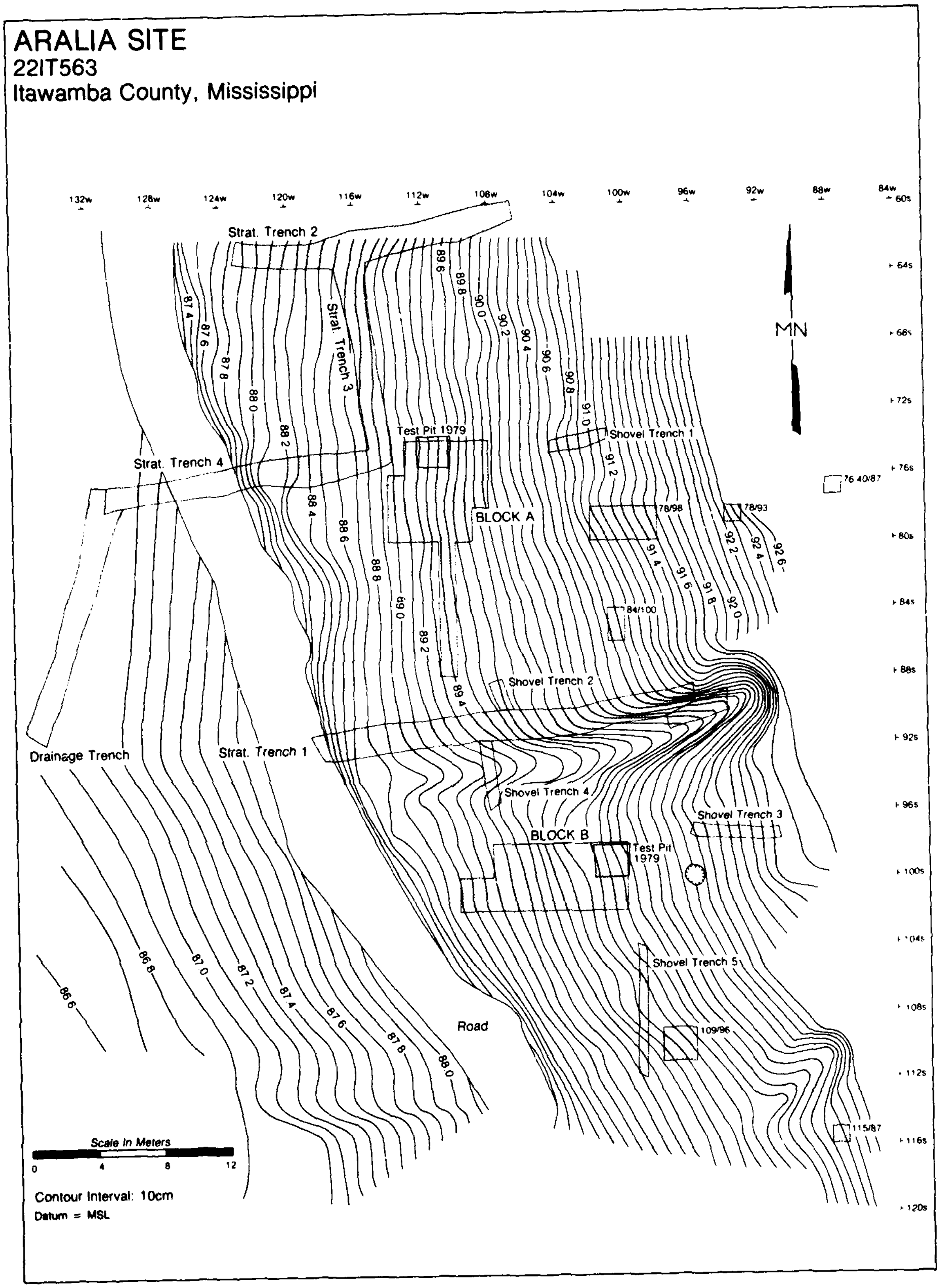

ARALIA SITE
22IT563
Itawamba County, Mississippi
132w
128w
124w
120w
116w
112w
108w
104w
100w
96w
92w
88w
84w
60s
64s
68s
72s
76s
80s
84s
88s
92s
96s
100s
104s
108s
112s
116s
120s
MN
Strat. Trench 2
Strat. Trench 3
Strat. Trench 4
Strat. Trench 1
Test Pit 1979
BLOCK A
BLOCK B
Shovel Trench 1
Shovel Trench 2
Shovel Trench 3
Shovel Trench 4
Shovel Trench 5
Drainage Trench
Road
76 40/87
78/98
78/93
84/100
109/96
115/87
Test Pit 1979
86 6
86 8
87 0
87 2
87 4
87 6
87 8
88 0
88 2
88 4
88 6
88 8
89 0
89 2
89 4
89 6
89 8
90 0
90 2
90 4
90 6
90 8
91 0
91 2
91 4
91 6
91 8
92 0
92 2
92 4
92 6
Scale In Meters
0
4
8
12
Contour Interval: 10cm
Datum = MSL

Figure 6.3

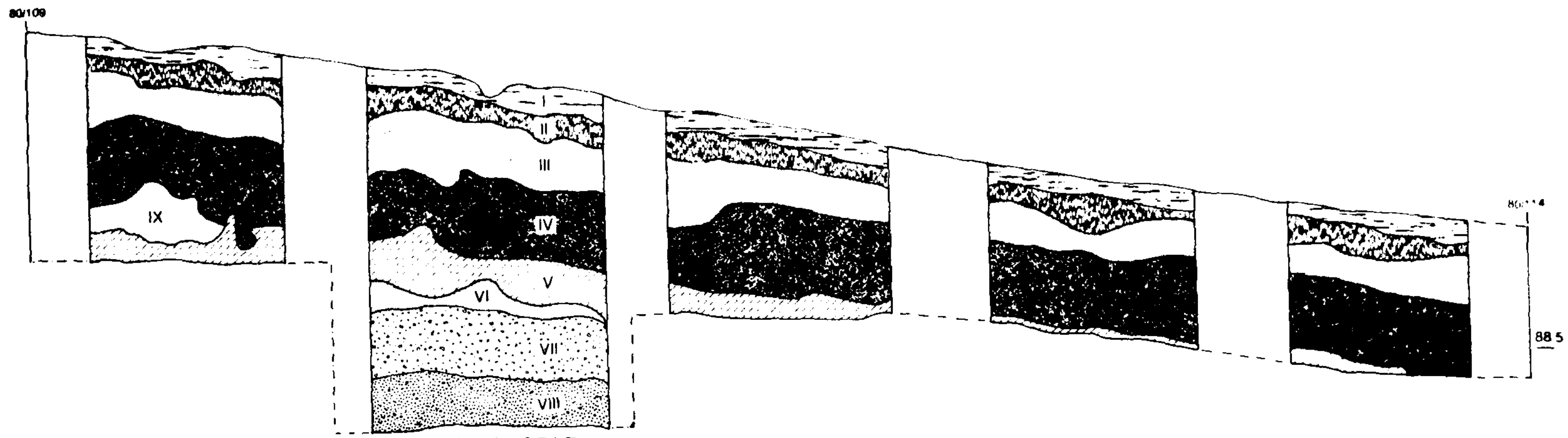
Site 22IT563: General view of site looking east prior to clearing

Figure 6.4

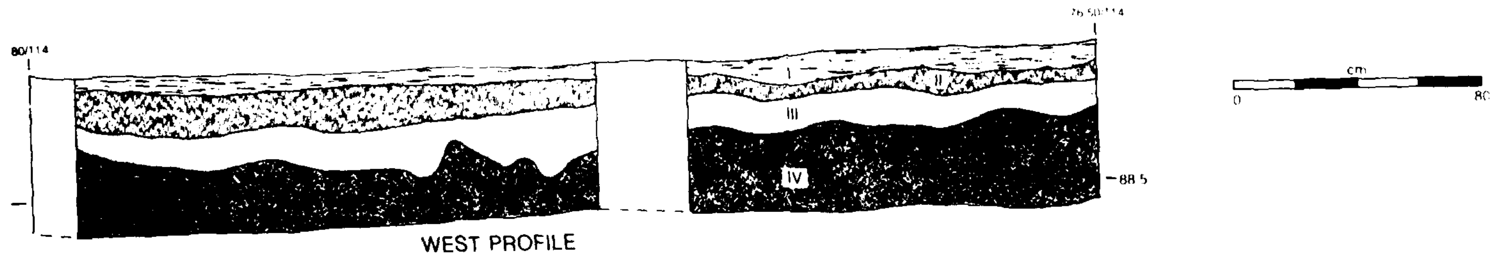
Site 22IT563: General view of site (at truck) looking east after hand clearing

Figure 6.5

Site 22IT563, Block A: Stratigraphic profile



SOUTH PROFILE



WEST PROFILE

22IT563

BLOCK A

I. *Root zone*, very dark grayish brown (10YR 3/2) loam.
II. Dark yellowish brown (10YR 4/4) loam.
III. Yellowish brown (10YR 5/6) sandy loam.
IV. Dark yellowish brown (10YR 4/4) sandy loam.
V. Yellowish brown (10YR 5/8) sandy loam mottled with light yellowish brown (10YR 6/4) sandy loam.
VI. Yellowish brown (10YR 5/8) loamy sand.
VII. Yellowish brown (10YR 5/6) sand mottled with strong brown (7.5 YR 5/6) sand.
VIII. Brown (7.5YR 5/4) loamy sand mottled with strong brown (7.5YR 5/6) sand.
IX. Brown (7.5YR 5/4) loamy sand

Figure 6.6

Site 22IT563, Block A: Stratigraphic profile

Figure 6.7

Site 22IT563, Block A: Close-up view of Feature 10 cross section

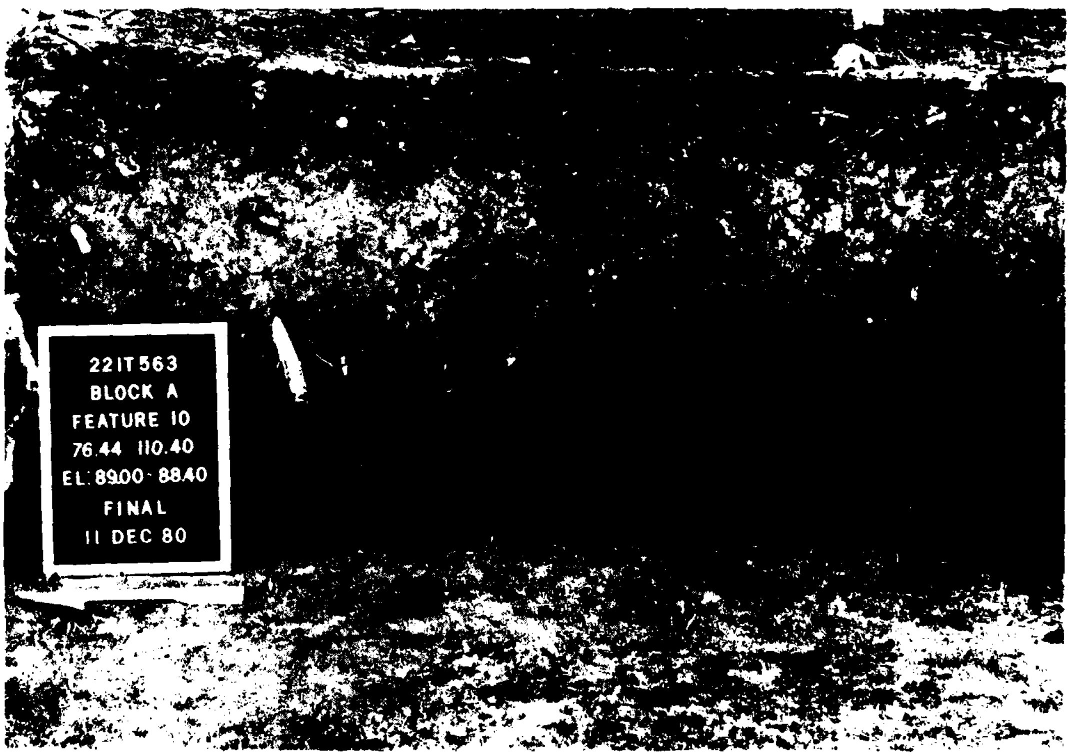
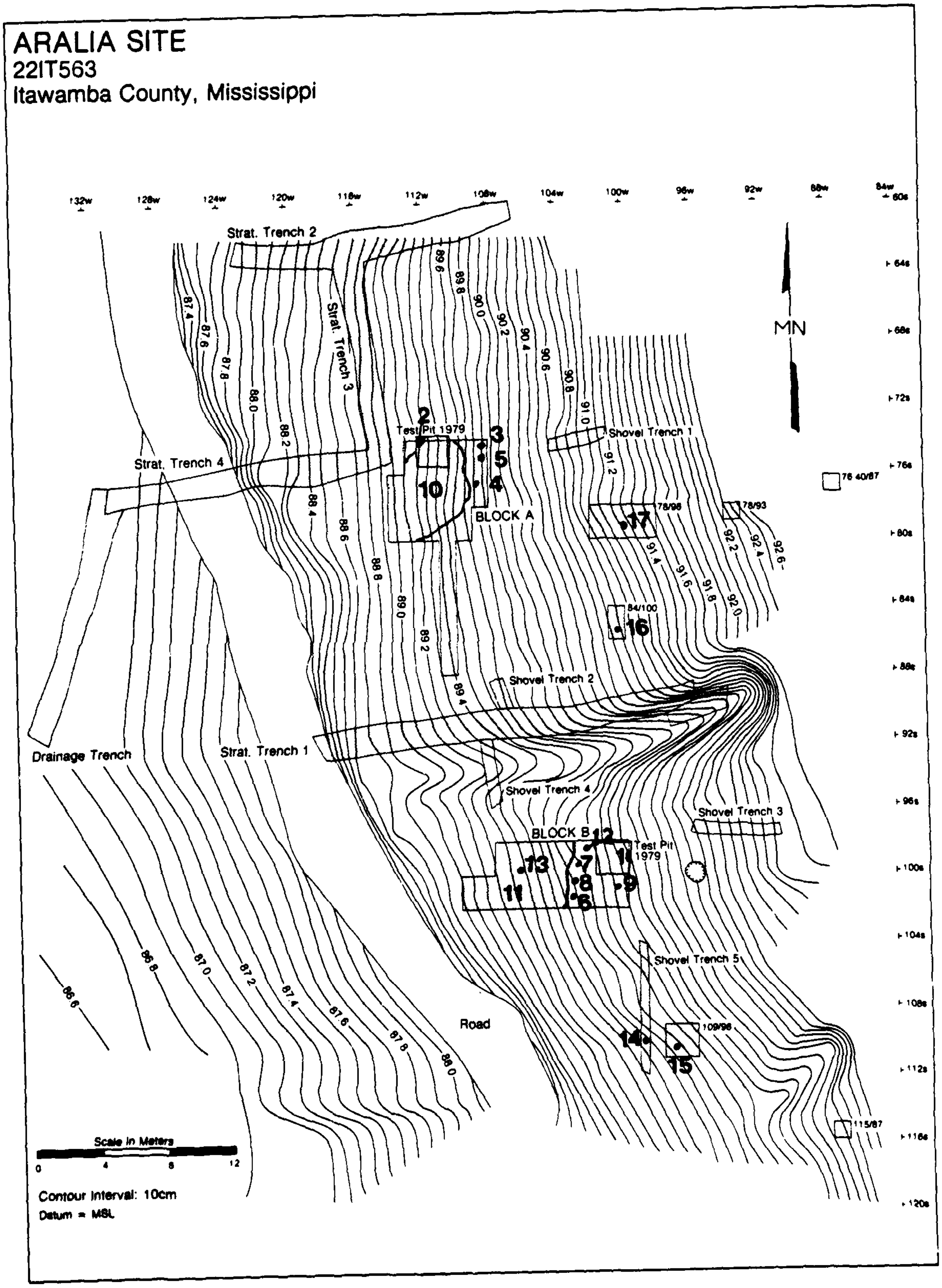

22IT563
BLOCK A
FEATURE 10
76.44 110.40
EL: 89.00 - 88.40
FINAL
11 DEC 80

Figure 6.8

Site 22IT563, Block B: Stratigraphic profiles

Figure 6.9

Site 22IT563: Distribution of Features



ARALIA SITE
22IT563
Itawamba County, Mississippi
MN
Strat. Trench 1
Strat. Trench 2
Strat. Trench 3
Strat. Trench 4
Drainage Trench
Shovel Trench 1
Shovel Trench 2
Shovel Trench 3
Shovel Trench 4
Shovel Trench 5
Test Pit 1979
BLOCK A
BLOCK B
Road
Scale in Meters
0 4 8 12
Contour Interval: 10cm
Datum = MSL

Figure 6.10

Site 22IT563: Selected ceramics: Alexander Incised

a. 1780-1
b. 1558-2
c. 1482-7/8
d. 238-1
e. 1648-1
f. 222-1
g. 395-1

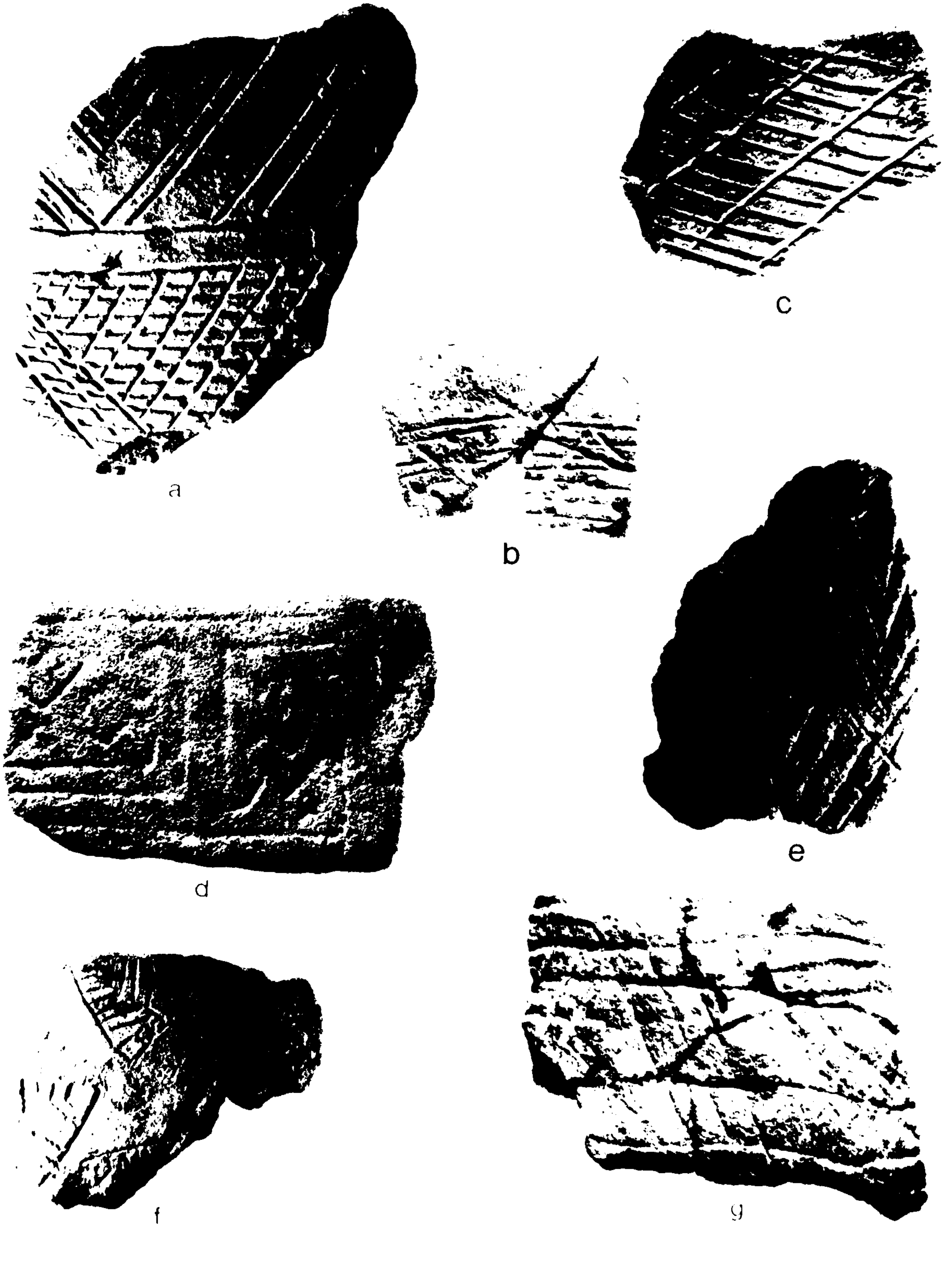
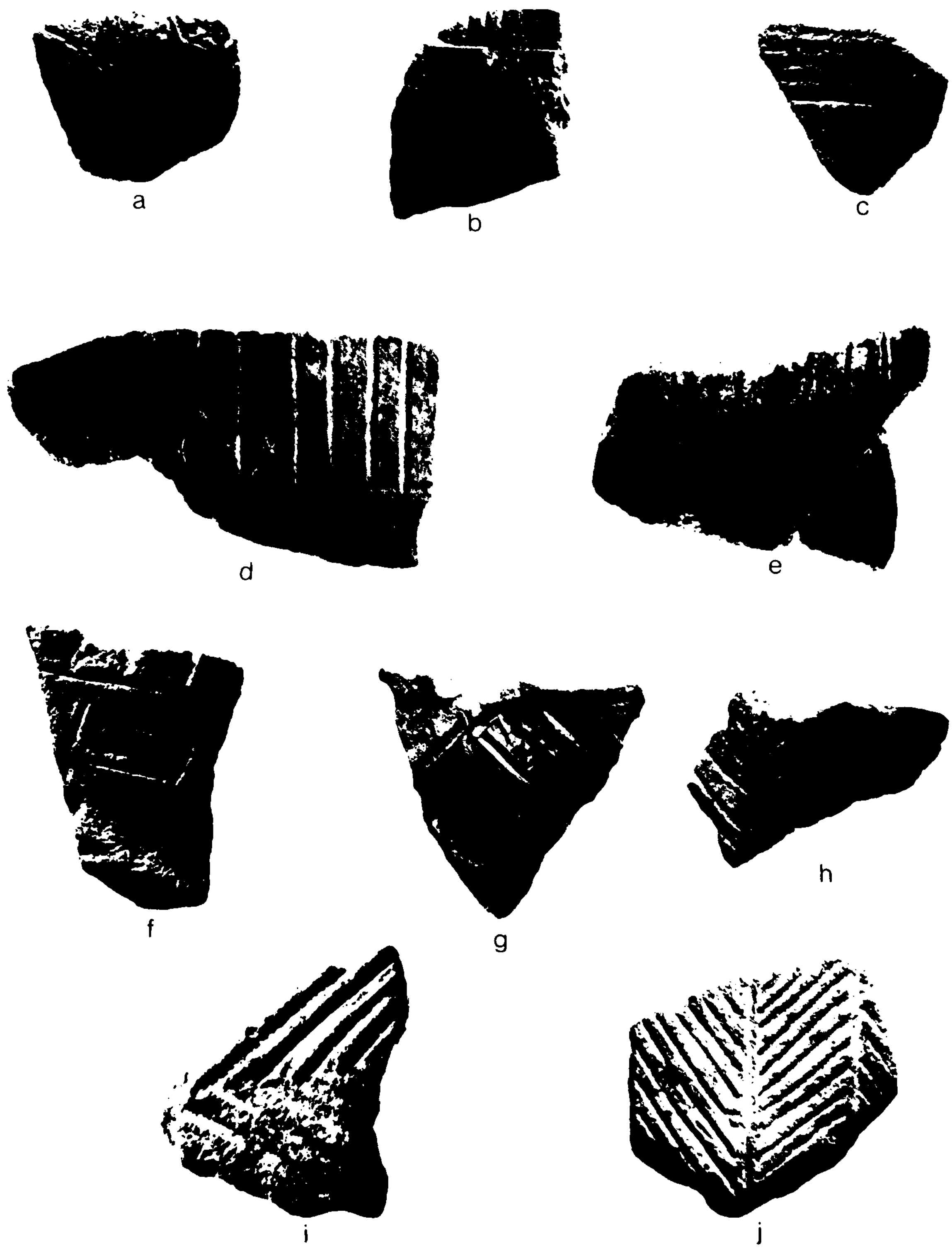

a
b
c
d
e
f
g

Figure 6.11

Site 22IT563: Selected ceramics: Alexander Incised

a. 779-1
b. 1557-2
c. 1737-1
d. 1503-1
e. 2055-1
f. 1183-1
g. 900-1
h. 1695-1
i. 1646-1
j. 1549-1



6 13

Figure 6.12

Site 22IT563: Selected ceramics: Alexander Incised

a. 1864-1
b. 2176-1
c. 2626-1
d. 1551-3
e. 1907-3
f. 680-1
g. 1358-1
h. 679-1
i. 584-10

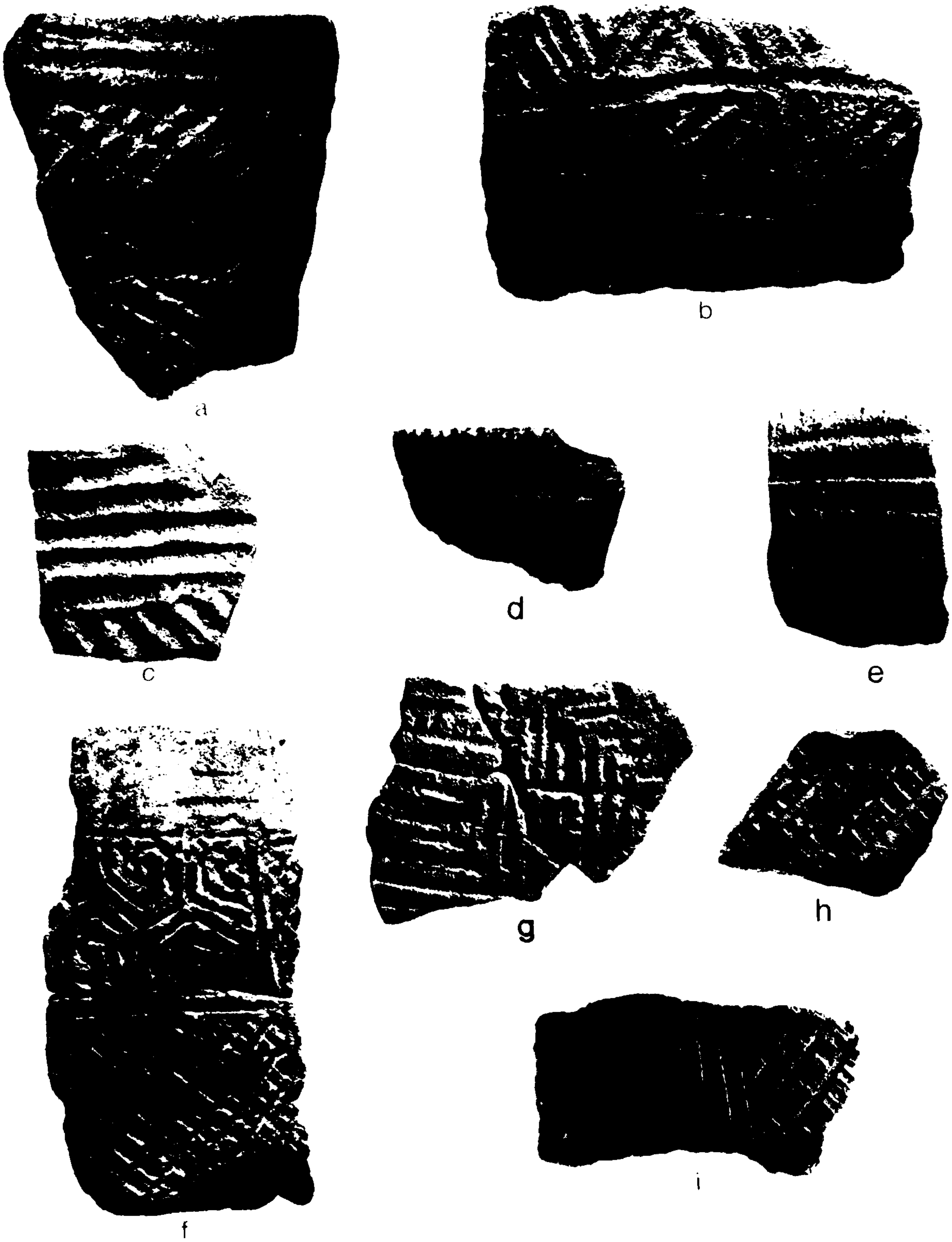

a
b
c
d
e
f
g
h
i

Figure 6.13

Site 22IT563: Selected ceramics: Alexander Pinched

a. 148-1
b. 671-1
c. 187-1
d. 2159-1
e. 1402-1
f. 1561-1

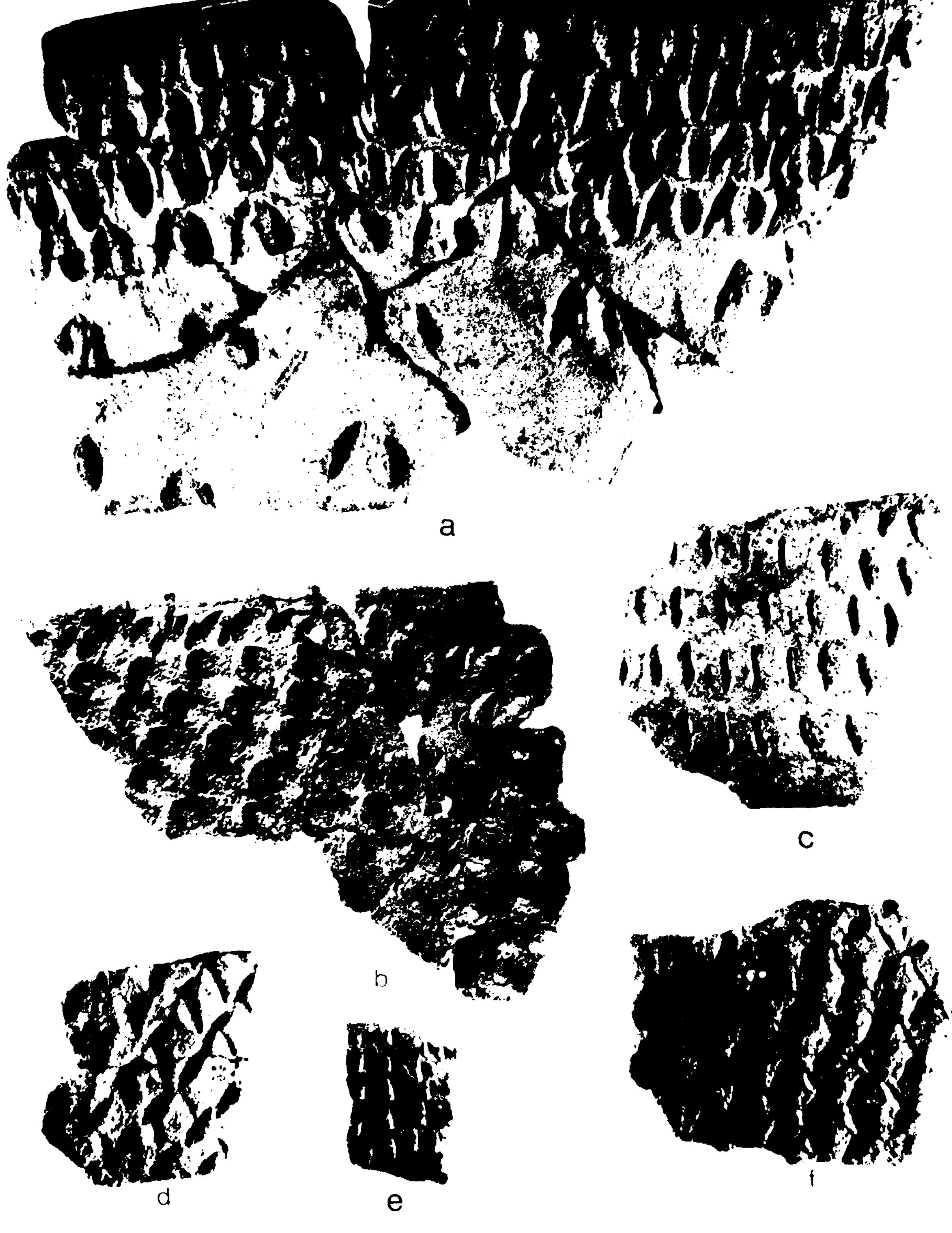

a
b
c
d
e
f

Figure 6.14

Site 22IT563: Selected ceramics: Alexander Pinched

a. 2334-1
b. 1722-7
c. 931-5
d. 674-1
e. 2011-1
f. 2421-1
g. 2418-1
h. 1364-1
i. 476-1
j. 1850-1
k. 1603-1

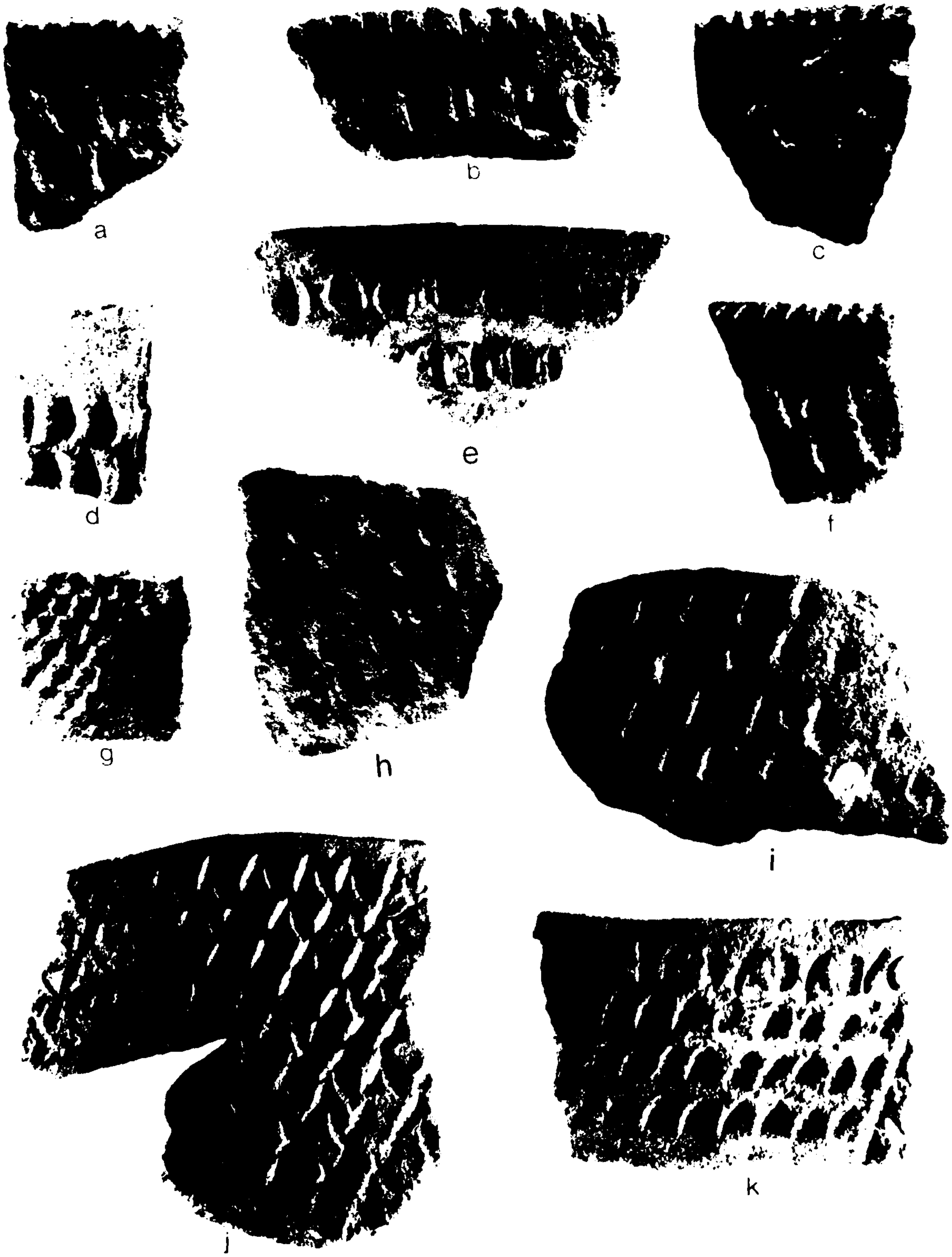

a
b
c
d
e
f
g
h
i
j
k

Figure 6.15

Site 22IT563: Selected ceramics: Alexander Incised/Pinched and Incised/Punctate

Incised/Pinched
a. 2521-1
b. 1689-5
c. 1768-1
d. 2540-1

Incised/Punctate
e. 343-20
f. 1401-1
g. 2328-1
h. 1763-1
i. 1870-7
j. 666-1
k. 391-18

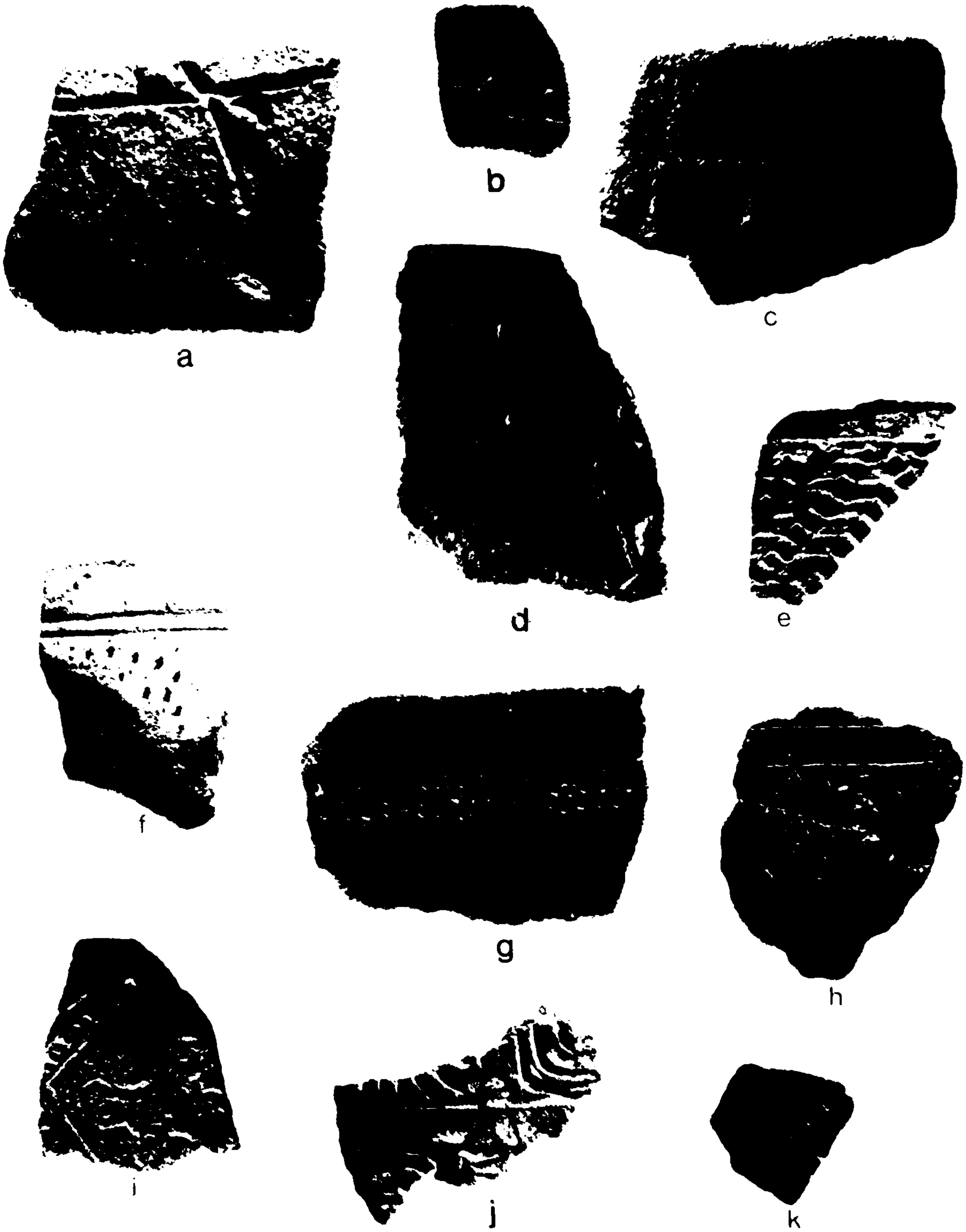

a
b
c
d
e
f
g
h
i
j
k

Figure 6.16

Site 22IT563: Selected ceramics: Alexander Incised/Punctate and Columbus Punctate

Incised/Punctate
a. 1079-9
b. 1562-1
c. 2359-1
d. 1491-2,1
e. 2028-1
f. 2234-1

Columbus Punctate
g. 147-5
h. 672-1
i. 1532-1
j. 2477-2
k. 1504-1
l. 195-1


a
b
c
d
e
f
g
h
i
j
k
l

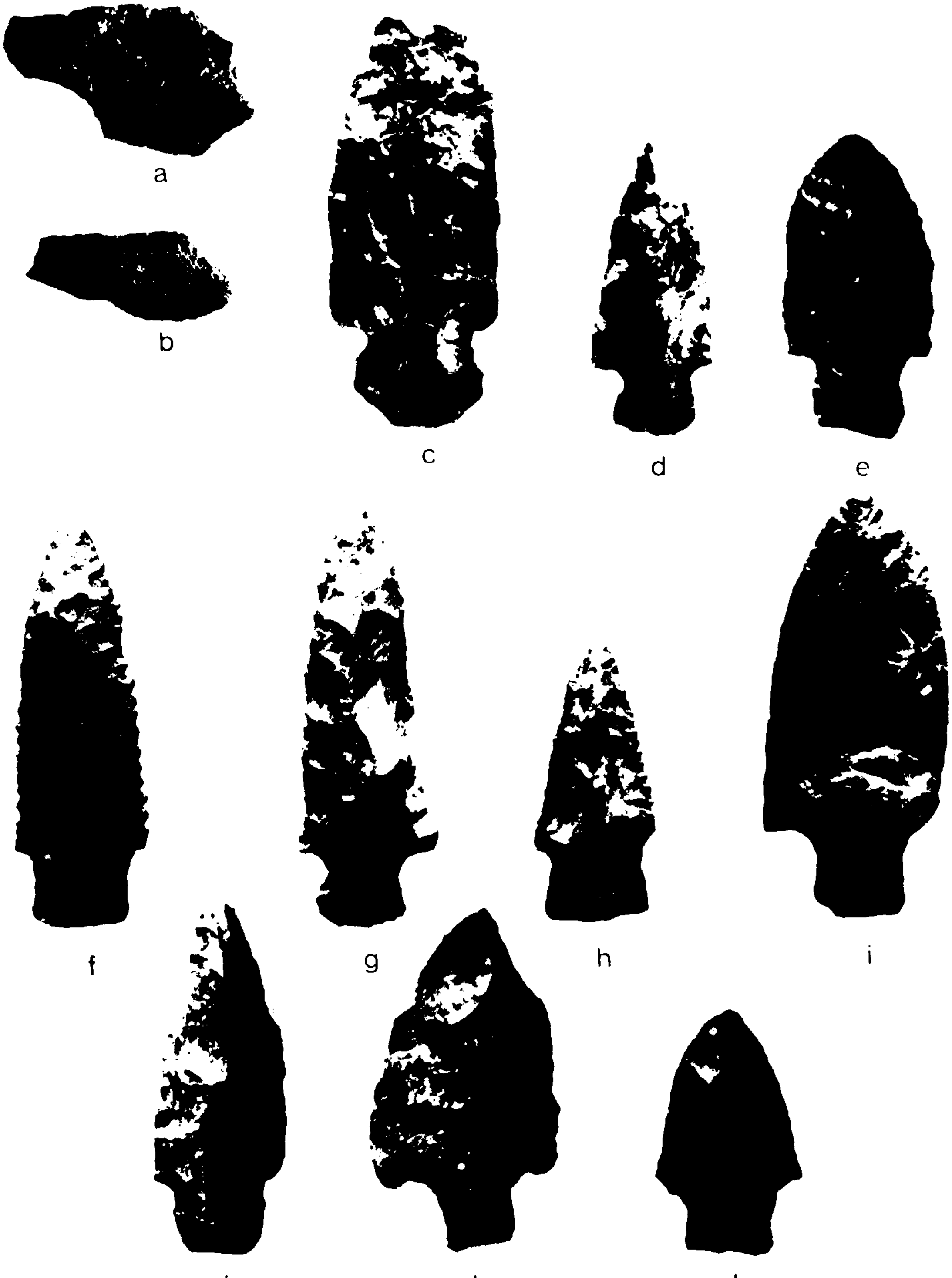
Figure 6.17

Site 22IT563: Selected ceramic pipes: Alexander Incised/Punctate and projectile point/knives: Flint Creek and Little Bear Creek

Alexander Incised/Punctate Pipes
a. 1338-1
b. 1076A-1

Flint Creek Projectile Point/Knives
c. 1976-1
d. 581-12
e. 1351-1
f. 1523-1
g. 1064-1
h. 1362-1

Little Bear Creek Projectile Point/Knives
i. 2304-1
j. 2400-1
k. 1934-1
l. 1486-42



6. 105

Figure 6.18

Site 22IT563: Selected chipped stone tools

Projectile Point/Knives
- a. Gary
- b. Cotaco Creek
- c. Residual Stemmed

Cores
- d. 180° Uniface

Preforms
- e. Preform 1
- f. Preform 2
- g. Preform 2
- h. Preform 2

Bifaces
- i. Expanding Triangular Biface Blade
- j. Triangular Biface Blade

Figure 6.19

Site 22IT563: Selected chipped and ground stone tools

Drills
- a. Stemmed Drill (2113-1)
- b. Stemmed Drill (2365-16)
- c. Expanding Base Drill (2605-1)

Perforators
- d. Perforator (583-9)

Other Uniface and Biface Tools
- e. Chipped Axe (1594-1)

Ground Stone
- f. Bead (1400)


a
b
c
d
e
f

CHAPTER 7

EXCAVATIONS AT THE POPLAR SITE: 22IT576

INTRODUCTION

SITE HISTORY

Site Identification

The Poplar site (22IT576) is a deeply stratified, multicomponent midden deposit in the floodplain of the Upper Tombigbee Valley in Northeast Mississippi (Figure 7.1). The site was initially recorded during Blakeman's survey of the canal section of the Tennessee-Tombigbee Waterway (Blakeman 1975:19) and a surface collection indicated the presence of Gulf Formational (Transitional Archaic/Woodland) and Woodland (Miller I & II) components. The site was considered significant (Blakeman 1975:61) and recommended for further investigation.

Site Testing

The Poplar site was tested by the University of Alabama in 1979 (Bense 1979b, 1982a). The objectives of testing were to determine the depth, extent and association of the cultural deposits or features. In addition, an estimate of the post-depositional disturbance was to be made.

Testing consisted of three 2 by 2 m excavation units taken to a depth of 140 cm below the surface (Figure 7.2). This revealed a dark organic midden zone 90 to 100 cm thick and a yellow brown stratum directly below it. The cultural material recovered indicated that the site had been occupied consistently from the Late Paleo-Indian through the Mississippian stages. Intact components were limited to the Paleo-Indian (Quad) through initial Late Archaic (Benton). The remaining midden deposits appeared to be mixed throughout the upper 70 cm. Two features were encountered: one fired aggregate associated with the Benton component and a pit containing diagnostic sherds of the Gulf Formational Stage components (Wheeler and Alexander Horizons). Five human teeth were recovered in one unit, possibly associated with the Wheeler Horizon. A dog burial was also recovered 1 m below the surface, but a pit could not be detected nor could a cultural affiliation be determined.

The testing of 22IT576 resulted in its recommendations for intensive excavation in the mitigation plan for the waterway (Bense 1979b:11-12, 1982a:405-410). The information potential of the site lay in Archaic chronology, lifeways and paleo-environment in the Upper Tombigbee Valley. Large block excavations were recommended to improve visibility and identification of associations.

Duration and Conditions of Fieldwork

The extensive excavation of 22IT576 was implemented as part of a contract between the U. S. Army Corps of Engineers and the University of West Florida. This document is a descriptive report of these efforts.

Twenty-eight work weeks were spent at the Poplar site. Excavation began on 4 February, 1980 and continued until 3 September 1980. The majority of the fieldwork was completed by 11 August by a field crew averaging between 12 and 14 numbers. A small crew of three to five persons was employed to complete the stratigraphic drawings, final photographs and demobilization of the site.

The conditions of fieldwork at 22IT576 experienced the extremes of three seasons (Figure 7.3 and 7.4). In the winter during the first weeks of fieldwork, the weather was bitter cold with snow, sleet, and freezing rain. During March heavy rains caused severe flooding and 90% of the site went underwater for two days (Figure 7.5 and 7.6). The water table which had been between 0 and 50 cm below the surface through March began to drop in May and continued throughout the summer. The summer of 1980 set records for heat in the northeast Mississippi. June and July saw daily temperatures above 90° with one stretch of 13 days with temperatures over 100°. This was accompanied by a severe drought throughout the summer (Figure 7.4).

Access to the site from February through May was by boat and foot. Vehicles were parked 0.8 km north of the site at the termination of the Queen Lake road. A temporary drainage canal had been excavated in late 1979 which extended from the north past and adjacent to the Poplar site (Figures 7.4 and 7.7). This drainage canal was used for site access by boat for equipment and the spoil pile was used by foot for personnel. The increasing dry weather of the summer permitted vehicle access during this time.

The poor accessibility of the site was expected, and it did cause many delays in work. Many person hours were spent in boating equipment, walking down wet sticky spoil piles, and wading breaks in it. The hardships endured by the crew were many, yet the schedule was met and work was suspended for only five days during the seven months of fieldwork.

RESEARCH RATIONALE

The testing of the Poplar site (Bense 1979b, 1982a) provided information which indicated that this site was significant due to

the presence of Archaic and perhaps Paleo-Indian Stage depostis. The recovery of a complete Quad point in what appeared to be the correct stratigraphic position and good context was unique to the waterway. In addition, the site contained a variety of features, as well as human and dog burials. The midden deposits contained abundant cultural material. These factors were important in designing the research questions to be investigated at 22IT576.

The excavations conducted at this site were designed to address the research issues of cultural chronology in the Upper Tombigbee Valley (UTV), site settlement patterns at a floodplain basecamp, subsistence activities, technology, and resource utilization. In addition, early to mid-Holocene environmental reconstruction was to be addressed through geomorphological studies of the site sediments and position in the floodplain. The Poplar site was conducive to investigations of culture and environment between ca. 12,000 and 5,000 B.P.

The integration of the research questions to which 22IT576 was amenable with the entire eleven site investigation program in the UTV is detailed in the Research Design for the project (Supplement I). The reader is referred to that document and Chapter I of this report for further information on the overall research design.

SITE DESCRIPTION

LOCATION

22IT576 was located 2.8 km northwest of Fulton in Itawamba County, Mississippi (Figure 7.1). The site was located in the active floodplain, 0.6 km west of the valley wall and 0.6 km south of Queen Lake. The confluence of Cummings Creek and the Tombigbee River is 1.1 km to the southwest of the site.

Legal Description

The Poplar site was in the NE1/4 of the NE1/4 of the NE1/4 of Section 23 in Township 9S, Range 8E of the Fulton, Mississippi Quadrangle (U.S.G.S. 7.5 minute series). The Universal Transverse Mercator Grid coordinates for the site were Zone 16, Easting 368,860, Northing 3,795,480. The geographic coordinates were 83° 25' 33" longitude and 34° 17' 32" latitude.

Tennessee-Tombigbee Waterway Setting

The Poplar site was located in the pool above Lock C of the Canal Section of the Tennessee-Tombigbee Waterway (Figures 7.1 and 7.8). The canal is located less than 100 m to the west of the former site location.

LOCAL ENVIRONMENT

Physiography

22IT576 was located in the active floodplain of the Tombigbee River. The site was a topographic high approximately 40 by 50 m in size and 80 to 100 cm high. It was bound on the north and west by Delany Branch (Figure 7.2), a second order stream which drained Queen Lake. This lake is an abandoned channel segment 0.6 km to the north of the site. Delany Branch emptied into a backwater slough 350 m to the southwest. The current channel of the Tombigbee River lies approximately 800 m to the south southwest of the site location. Delany Branch is part of a complex interconnected system of former channel segments and intermittent streams which drain this portion of the floodplain and the uplands. For a more detailed discussion of this particular area of the floodplain, see Bense 1982b.

The site was bordered on the east and south by a backwater slough known as the Jack Lake which joined Delany Branch just to the west of the site (Figure 7.7). The Jack Lake extended to the east approximately 400 m and contained water 1 to 3 meters deep year-round. To the east of the site was another backwater slough which joined Delany's Branch and the Jack Lake. It was intermittently wet and served as a chute for the stream during high water.

In sum, the Poplar site locality was an isolated island surrounded by streams and sloughs on all sides. Permanent water was present on the north, east, and south. A large wetland swamp was also present 350 meters to the south of the site.

The landform of the site locality appears to have originated as a point bar deposit of the Tombigbee River or a tributary which likely formed on a truncated terrace outlier of the nearby valley wall. The soils and sediments composing the site consisted of deposits of fluvial origin. As will be discussed in a later section of this chapter, the site had grown at varying rates for the past 10,000 years and continued to the present.

In 1979, prior to testing, the site was covered in mixed second growth hardwoods with a thick understory of shrubs and vines. The dominant trees were poplar, oak, and hickory.

Plant and Animal Communities

The plant community of the Upper Tombigbee Valley floodplain, prior to historic disturbance, consisted of an overstory composed of tupelo and black gums, sweet gum, oak, hickory, and cypress. An ash-elm-cottonwood association intermingles with the hardwood forests and also includes willow, sycamore, beech, and maple. Vegetable food resources are abundant in the floodplain forest and are discussed in Chapter 3 of this report.

The floodplain forest is inhabited by a wide range of large and small mammals, birds, waterfowl, and reptiles. The faunal resources of the Upper Tombigbee Valley are also discussed in detail in Chapter 3 of the report. The primary large mammal is the deer, while the common small mammals of the floodplain consist of red fox, racoon, skunk, mink, beaver, grey squirrel, cottontail rabbit, and oppossum. The turkey is the largest bird, but doves, quail, owls, hawks, and migratory ducks abound. The reptiles include many turtles and snakes. Fish are abundant and include bass, bowfin, carp, catfish, gar, perch, and sunfish. All of the above resources are easily accessible from the Poplar site in the floodplain of the Upper Tombigbee Valley.

Historic Landuse

The historic landuse of 22IT576 includes cultivation, logging, containment of hogs, and pothunting. The site was cleared in the mid-1930s by Mr. Dorsey Moore who maintained possession until acquisition for the waterway. He cultivated the site with mules until 1945 and noted the abundance of cultural material in the plowzone. From this time to the present, the site was intermittently used as a holding pen for hogs which inhabited the floodplain. The second growth hardwoods were harvested in the late 1970s in preparation for government acquisition for the Tennessee-Tombigbee Waterway.

Visible remains of pothunting were restricted to two recent holes observed in 1979. One was located in the center of the site (Figure 7.3) and was one meter in diameter and 80-90 cm deep. The second pothole was located in the southwest sector of the site and was only 30 cm in diamter and 20 cm deep. According to Mr. Moore, landowner for over 50 years, no other potholes had

been dug into the site and he had withheld the site location from relic collectors in the area.

Description of Site Prior to Excavation, February 1980

The Poplar site was a low mound in the floodplain surrounded on three sides by permanent water. The site supported recently thinned second growth hardwoods ranging up to 45 cm in diameter at breast height (DBH). The overstory included white oak, pin oak, sweet gum, and beech. American cypress was present on the site periphery standing in the branch, lake, and wetlands. The understory included briars, honeysuckle, wild grape, and poison ivy.

The surface of the entire site was covered with old cultivation furrows which were oriented north/south. Based on the size of several oaks growing within the furrows, cultivation appears to have been terminated for approximately 30-40 years. Also visible on the surface was a large depression which was 7 m north/south by 4 m east/west centered at 108.5S/104W. The depression averaged between 5 and 10 cm deep and was crossed by the old cultivation furrows. The two potholes noted in testing were still present as were the three 2 by 2 m test excavation units.

EXCAVATION STRATEGY

RESEARCH OBJECTIVES

The purposes of the 1980 excavations at 22IT576 were to collect information on the cultural chronology, site settlement patterns, technology, subsistence, and resource utilization. In addition, the geomorphology of the site deposits were to be investigated.

The Poplar site was the first site investigated on this project and served as a baseline for both field strategy and cultural information. The results of efforts at 22IT576 caused adjustments in expectations and methodologies used at other sites investigated throughout the project. In effect, the Poplar site served as a testing ground for the application of the proposed and newly generated excavation strategies and research objectives.

METHODS AND TECHNIQUES

The field methods utilized at 22IT576 and at all other sites are presented in Appendix V: Field Manual. The reader is referred to

this document for a detailed explanation of the procedures, forms, and control methods used on this site and all others on the project. What will be presented here are the specific procedures used at 22IT576 and the deviations from those included in the manual.

The field methods used at this site included clearing, topographic mapping, visual and chronical coring, backhoe trenching, large and small excavation blocks, and expansion of the 1979 test pits. Fieldwork conducted for soils and sediment geomorphology include sampling, augering, and removal of two monoliths. Each method used had specific goals. Often results of one method led to the use of another.

Due to the length of time spent on the site through three seasons of the year and for the protection of the crew, shelters were constructed of PVC pipe frame and clear visquine over each excavation unit and the water-screen station (Figures 7.3, 7.4, and 7.5). These were designed and tested at the Poplar site and after initial adjustments, worked quite well. Heavy winds and rain would collapse the shelters overnight, but they could be quickly uprighted with minimal damage to the units.

The waterscreen station was located on the northern edge of the site near the 100S/100W grid point (Figures 7.2 and 7.3). The station was elevated approximately one meter above the ground surface with a ramp approach for wheelbarrows on the southern edge. Three troughs 1.2 by 2.4 m (4 by 8 feet), into which the excavated soil was dumped, were on the platform. Water was mixed with the soil in the troughs. The "soupy" mixture ran into screen stands set below a constricted opening 60 cm wide at the low end of the inclined trough. Screens of 0.25 inch and 0.06 inch hardware cloth were placed in the stands as control procedures dictated. Water was supplied by a Homelite 386 gallons per minute trash pump powered by a 7 to 8 hp gasoline engine. Fire hoses were used to direct the water and nozzles, and valves controlled the amount and kind of spray used. Water from the eastern drainage ditch was used for all processing.

Coring Investigation

Both visual and chemical cores were taken with a drive tube Oakfield earth auger systematically on a grid over the entire site surface of 22IT576. Depth of the cores varied from 60 cm to over 220 cm, but always penetrated well below the dark midden zone. Chemical cores were taken at 8 m intervals. Two perpendicular control transects of chemical cores were taken at 4 m intervals across the major axes and deepest deposits of the site (112S and 108.5W). Visual cores were taken at 2 m intervals.

The purpose of the coring program was to identify anomalies and strata below the surface so that excavation units could be placed in representative areas of the site. The visual core information was recorded on-site and identified the core and depth of charcoal, fired clay, artifacts, and strata. The chemical cores were samples at 20 cm intervals and sent to the lab. The samples were then tested for pH, phosphates, and carbonates in hopes of discerning patterns or anomalies of these factors in the site deposits.

The results of the chemical analyses were noted. The pH and carbonate tests revealed no identifiable anomalies within the site. The phosphate spot test did indicate two trends. Phosphate levels increased with depth and toward the center of the site. A second concentration of phosphate was identified in the northwest portion of the site (112S/112W).

When viewing the results of the chemical tests on an on-site vs. off-site basis, the results indicate that the site pH is more acid (5-7) and the phosphate readings are higher on-site. No carbonates were detected in any samples.

The visual cores included 720 cores and averaged 160 cm below surface. The information recovered from them indicated that the base of the dark organic midden was relatively level about 1 m below the surface. This was followed by a yellow brown silty clay. Cultural material (charcoal, flakes, silty clay to sandy clay, fired clay, ash, etc.) dropped out between 100 to 120 cm below surface, although in the center of the site, charcoal was present to 140 cm. No unusual anomaly of cultural material was observed from the visual core data.

Excavation Blocks and Test Pits

Four excavation Blocks were completed at 22IT576 (Figure 7.2). These were lettered A through D and were placed as a result of coring and the 1979 testing information. Block A, B, and C were 4 by 4 m in size and were placed in the inner third of the site elevation. These were designed to investigate the site settlement pattern. Block D, the largest unit (12 by 8 m), was placed in the center of the site to examine the area of most intensive activity and thickest deposits. The hypotheses leading to unit placement on this and other similar sites in this project are presented in the Research Design of this report (Supplement I). Blocks A, B, and C were commenced first, followed by Block D. All units were excavated by hand to sterile soil.

Block A (122S/92W)

This block was primarily a 4 by 4 unit, although a 2 by 2 m extension was made to include a feature in the upper levels. This unit was placed in the southeast portion of the site to determine the nature of the mound periphery both geomorphologically and culturally. Previous investigations in this and other areas had suggested that the edge of this type of site would contain structures and be informative as to site morphogenesis (see Research Design, Supplement I). Also important in this block placement was the proximity to the Late Paleo-Indian material in 1979 test unit 114S/100W. An additional 2 by 2 m unit was extended from this pit (120S/94W) to recover all of Feature 5. This unit was terminated at the base of Level 2 (80.8) and the block was excavated to 78.90 m AMSL.

Block B (128D/108W)

Block B was a 4 by 4 m unit located in the southern part of the site. The unit was placed in an area of large grinding tools which were recovered during the excavation of the privy just to the south. In addition, the site periphery questions addressed in Block A were also part of the goals of Block B. This unit was excavated to 78.90 m AMSL (Level 20).

Block C (110S/124W)

Block C was 4 by 4 m in size. The unit was placed just to the east of a phosphate anomaly (high readings). The anomaly actually was centered at 112S/128W, but a large stump, a depression and a deep (140-160 cm) stratum of dark greyish brown soil with charcoal caused the excavation unit to be placed at 110S/124W. This placement centered the visual stratigraphic anomaly and was excavated to 79.00 m AMSL (Level 18).

Block D (108S/98W)

Block D was the largest unit excavated at the site (12 by 8 m). The placement of this block was based on the following factors: 1) a high phosphate anomaly, 2) deepest and most frequent cultural material, 3) presence of late Paleo-Indian material in 1979 test unit (114S/100W), and 4) it was the highest point of the site. Information from testing other similar sites in the area has indicated that the thickest and most informative cultural deposits occur in the areas of highest elevation

(Atkinson 1974; Bense 1979a, b, and c, 1982a). This block was excavated through Level 23 AMSL in the northwest corner 2 by 2 m unit. The remaining western half of the unit was excavated through Level 22 (78.8 m AMSL) and the eastern half was excavated through Level 17 (79.4 m AMSL). The differences in levels excavated in this block were due to deep hand testing to confirm the culturally sterile deposits in this area of the site as well as the pressure of limited time on the site.

Test Pits (99S/112W, 100S/112W,119S/113W, 114S/98W)

The three original test pits excavated in 1979 were extended in the 1980 excavations. Unit 114S/100W was included in Block D and extended from Level 14 (79.7 m) through Level 17 (79.4 m). In the cleaning of the walls and profiles of Test Unit 100S/112W, a partially excavated feature was encountered on the floor. A 1 by 1 m unit (99S/112W) was extended from the north wall to include this feature for removal. In addition, the original 2 by 2 m unit was extended from Level 12 (80.0 m) through Level 15 (79.6 m). Test unit 119S/113N was extended in depth from Level 12 (80.0 m) through Level 17 (79.4 m). The profiles from both the latter units were cleaned and documented in 1980.

Stratigraphic Trenches

Five trenches were dug with a backhoe to further investigate the stratigraphy of the site (Figure 7.2). The selection of the trench placement was based on consultation of the site directors with the soil and geomorphology consultants. All were on hand during trenching operations. The stratigraphic drawings of both the trenches and the hand excavation units were correlated to address the questions of site morphogenesis and development. The trenches were placed primarily on the edges of the site as this is a sensitive area in determining site formation. The block excavations provided a sufficient view of the interior site deposits and no backhoe trenches were placed there. Trench number two was placed off-site in the edge of the drainage canal to obtain maximum depth and expose the Pleistocene deposits of gleyed clay which underlie the Upper Tombigbee Valley floodplain.

STRATIGRAPHY

The soils and sediments of the Poplar site have provided much data concerning the erosional/depositional environment of the Upper Tombigbee Valley. It was at this site that many initial

deductions were made concerning the origin and development of the strata. The correlation of these strata with cultural as well as climate episodes was observed here and used as a baseline for the remainder of this project.

This section describes the soils/sediments represented at 22IT576 and the geomorphology of the locale. The soils/sediments and geomorphology were investigated by David E. Pettry, Department of Agronomy, Mississippi State University, during the summer of 1981. Pettry examined the stratigraphy exposed in the excavation blocks and the backhoe trenches. He described and sampled a representative profile in Block D and investigated the surrounding environs by coring.

Fred J. Niles, Department of Geology, Eastern New Mexico University, and Pettry visited 22IT576 on June 28 and 29, 1981, to assess the geomorphology of the site. A series of five trenches were excavated at this time (Figure 7.2) to aid in identifying and correlating stratigraphic zones.

Pettry again visited 22IT576 on August 23, 1981. Bulk density samples were collected from representative strata from the west wall of Unit 119S/113W (1979 Test Pit) and a soil monolith was pulled. As a result of his investigations at the Poplar site, Pettry submitted a detailed report which is included in the following section

SOILS AND SEDIMENTS

Setting

The Poplar site occupies a topographic high in the eastern part of the Tombigbee River floodplain about 300 m west of the valley wall (Figure 7.9). Part of the site is subject to flooding during the winter and spring months. The floodplain has slopes of 0 to 2%, in contrast to slopes of 2 to 5% for the occupation mound. Local microrelief exists in the floodplain due to scouring and filling by floodwaters. The level floodplain merges abruptly with the steep valley walls.

The site appears to be a topographic feature caused by natural fluvial deposition. It is surrounded by a narrow slough (Figure 7.7) which appears to be aggrading. The slough is much wetter throughout the year than adjacent areas in the floodplain. The bottom sediments of the slough are dominantly blue-grey and olive-colored silt loam and silty clay loam overlying loamy materials. The blue-grey colors reflect the gleyed conditions resulting from wetness and lack of aeriation. The floodplain

sediments are siliceous but contain considerable glauconite and mica.

Soils

Uplands

Mature, well-developed soils with distinct eluviated A2 horizons and illuviated argillic horizons (Bt) comprise the upland areas adjoining the floodplain. Smithdale soils (Figure 7.9) of the upland areas directly east of the site have red subsoils that contain up to 35% clay in the argillic horizons (Bt). The upland soils are very strongly acid, highly weathered and siliceous with low base saturation levels (Ultisols). The Ora soils located in the uplands northeast of the site have dense, firm fragipan horizons below the argillic horizons at depths of 50 to 75 cm.

Floodplain

The floodplain surrounding the site is comprised of Kirkville and Mantachie soils (Figure 7.9) which have minimal soil development (Table 7.1). These soils dominantly have brown and yellowish-brown surfaces and grey, light grey or pale brown (Table 7.2) subsoils with loamy textures (Table 7.3). The floodplain soils have cambic B horizons (color B) with little or no eluviation and illuviation. They are strongly acid.

Site

The culturally altered soils of the site developed in loamy, fluvial, siliceous sediments. These soils are readily distinguished by very thick, humus rich, dark reddish brown epipedons (surfaces) which are due to prolonged cultural activity and habitation. The past occupation of the site has drastically altered normal pedogenic features of color, structure, consistency, horizonation, organic matter content, and certain chemical parameters. The soil comprising this occupation locale is uniquely distinct and differs greatly from adjacent soils of the region.

Dense populations of earthworms, crayfish, rodents, and other diverse microfauna and microflora thrive in the organically rich site which is elevated above the adjacent floodplain and seasonal wetness. Faunal and floral pedoturbation, in addition to the human activity, have tended to mix the upper meter of soil and

affected normal pedogenic development. The dark colored humic staining of the upper meter also tends to mask the natural horizonation (Figure 7.10, 7.11, and 7.13).

Physical

The upper meter of the site soil which is dark reddish brown with a moist hue of 5 YR (Table 7.4) differs markedly from the adjacent floodplain soils which have hues of 10 YR (Table 7.2). The soil epipedon of this occupation locale has a Munsell value which changes at least one unit from wet to dry in contrast to adjacent soils. The dark, reddish-brown epipedon has a distinct "greasy" feel when rubbed between the fingers. The dark epipedon grades into a paleosol at depths ranging from 130 to 150 cm (Figure 7.10 and 7.11). The paleosol exhibits a pronounced change in color with hues of 10 YR and increases in clay content accompanied by a structural change to subangular blocky. Ped faces in the paleosol have clay skins and sand bridging by clay which is characteristic of argillic horizons. A very pronounced polygonal network characterizes the paleosol, and polygons are separated by seams filled with silt and very fine sand which have been stripped of clay (Figure 7.12). Clay content decreases in the lower horizon of the paleosol and structure changes to massive. The horizons from 130 to 184 cm have definitive ped faces characteristic of argillic horizons. The paleosol appears to have evolved via pedogenic changes of a previous landscape which was subsequently buried by fluvial sediments. The discovery of the paleosol was unexpected in such a floodplain topographic position.

Particle size distributions (Table 7.5) suggest discrete fluvial depositions in the upper meter and reflect argillation in the underlying paleosol. A plot of the constant sand fabric (Figure 7.14) tends to indicate the textural discontinuities for the different depositional events based on variations between the skeletal and labile soil components. The major discontinuities generally coincide with the major stratigraphic layers.

Bulk density data (Table 7.6) for selected horizons show lower values in the upper epipedon than is common for soils in the region. The decrease in bulk density to 1.29 g/cm^3 at 65 cm depth coincides with the very rich charcoal content of this layer. Values increase abruptly below the epipedon, and levels are similar to those of argillic horizons of upland soils of the vicinity.

Chemical

Organic matter content is greatest in the 0-10 cm horizon and exceeds 1.5% in the upper 87 cm of the epipedon (Table 7.7) Values decrease with increasing depth to a low of 0/12% at 184-200 cm depth.

Free iron oxide contents (Table 7.7) exceed 2% in the upper 87 cm and then decrease abruptly before increasing in the paleosol. Total phosphorus contents are highest in the paleosol horizon (Table 7.7) at 146-184 cm depth and correspond to maximum clay content. Marked variations are noted in the organic phosphorus levels ranging from a high of 531.9 ppm in the 0-10 cm layer to a low of 74.9 ppm in the 120-130 cm layer. None were detected at depths of 10-51 cm, 87-97 cm and below 130 cm. The data present difficulty in interpretation since elevated organic P levels have been widely associated with human occupation (Griffith 1980). Field observations and other analytic data clearly indicate the 10-51 and 87-97 cm layers were influenced by cultural occupation, yet no organic P was detected.

Considerable variations in pH level occur with increasing depth, ranging from a high of 6.1 at depths of 97-120 cm to a low of 5.3 at the surface and at depths below 146 cm (Table 7.8). The soil pH levels in the site epipedon were considerably higher than those in adjacent floodplain soils which had average levels below 5. The elevated pH levels and discrete horizon differences are attributable to habitation and cultural activity.

Exchangeable aluminum levels were very low at the 120 cm depth and abruptly increased in the paleosol (Table 7.8). Higher exchangeable aluminum contents are often associated with intense weathering and/or older soils. Extractible acidity was considerably higher in the upper meter of the site soil and decreased with depth. The higher levels are associated with higher organic matter content.

Pedogenic Differences

Morphological, physical, and chemical characteristics of the site soil differ markedly from adjacent floodplain soils. Although bio-pedoturbation and humic staining tend to mask individual stratigraphic layers, morphological differences may be discerned. The buried paleosol forms the base of the site, and it is considered to be older than the upper layers.

The topographic position of the site suggests a possible point bar origin. However, the underlying basement paleosol suggests the site may have originated as an outlier of a dissected surface

which was abandoned by stream action and subsequently buried by fluvial sediments. The morphology of locale suggests that the site aggraded through the development of a parallel bar on the cut-off or abandoned paleo-land form. This accreation from natural processes was supplemented by the accumulation of remains contributed by the various occupants of the site since about 6,000 years ago.

Geomorphology

The Poplar site is composed of fluvial sediments in which cultural material has been encapsulated during the course of approximately 10,000 years of occupation. The deposits are loamy with differences present within this texture type.

As has been stated in the previous section, this feature in the floodplain appears to have formed as a point bar of a stream throughout the Holocene. The basal deposits of this physiographic feature appear to be an eroded Pleistocene terrace outlier remnant. The course of the Tombigbee River or tributary would have been directed around the outlier forming the point bar.

As can be seen in Figures 7.10, 7.11, 7.13, 7.15, and 7.16, the strata at 22IT576 are relatively level throughout the site. The strata are uniform in thickness generally within the 80.8 m contour line along the site.

The dominant texture of all deposits is loam. This implies that the nature of the deposition has been essentially homogenous throughout the Holocene and that the site has been in the same relative physiographic position. The loam texture indicates water movement that is neither rapid nor slow, rather a moderately flowing stream. Delaneys Branch would have been of sufficient size to have deposited the site sediments. With the aggradation of this and all other streams during the Holocene, its carrying capacity has decreased with time. This could be reflected in the general thinning of depositional units upwards in the profile. It should be remembered, however, that these deposits are affected by bio-pedeturbation which tends to mask individual stratigraphic layers. Particle size distribution throughout the profile in the center of the site suggests discrete fluvial depositions in the upper meter of the site (Zones I - V). Zones VI-VIII represent a truncated buried paleosol, within which individual depositional units can be identified.

Radiocarbon Dating

Six radiocarbon samples were submitted to Dicard Laboratories, Inc. from 22IT576. These are presented in Table 7.9. The samples were taken from control blocks of the midden deposits in Block D. Two of the samples were from culturally mixed deposits, two from the Benton/Sykes-White Springs, one from Eva-Morrow Mountain, and one from Early Archaic component (Figure 7.16).

The results show several patterns. First, the Benton and Sykes-White Springs dates agree with those from similar components at other sites in the project (22IT539 and 22IT590) and in the area. The 5995±155 (1/2 5730) date for Eva-Morrow Mountain is slightly young, but within an acceptable range. The Early Archaic date of 7426±650 (1/2 5730) has an unacceptably high sigma and is not within the established chronological range for Kirk and Big Sandy projectile point/knife types.

Of the six radiocarbon dates received from 22IT576, three are within the acceptable range, two date mixed deposits, and one has an unacceptably high sigma value. Regardless of context, the dates do increase in age with depth below the surface, resulting in a chronologically stratified sequence.

CULTURAL REMAINS

This section contains preliminary descriptions of the features, artifact classes and macrobotanical remains recovered from 22IT576. Due to the large number of specimens and features, these topics must be dealt with in a summary form. However, all data from the smallest provenience used (e.g., feature segments, plotted specimens, level segments) are presented in Supplements II, III, and IV of this report. Appendices I and II contain summary tables of the block/level and feature material. In each of the divisions of this section of the text, summary tables are presented for reference.

FEATURE CLASSES

The investigations encountered 119 features which have been classified into 10 feature types. Table 7.10 presents the classifications of the features and summary data.

Feature numbers were assigned in the field, however, some were voided due to lack of definition. Burials were assigned an initial feature number and when human remains were encountered, a burial number was assigned. Features are defined as nonportable

cultural phenomena such as artifact clusters, fired aggregates, hearths, and pits. Often the uppermost, more diffused portions of features (especially pits) were included in a segment of general level excavations. The detectable outline of pit features usually increased with depth. The segmenting process allowed more cultural material to be associated with a feature.

Feature recognition and definition throughout excavations were difficult. This was especially a problem in the dark, organically stained, midden deposits of the upper center of the site. As the site matrix became lighter (Zones V-VIII), feature recognition became easier.

The use of features in the interpetation of the site is mixed and depends on the strength of cultural affiliation. This was determined by artifact content and/or stratigraphic position. If a feature did not contain any diagnostic or temporal markers and was located in an unclear stratigraphic position, the affiliation could not be determined and was classified as unknown. The correlation of stratigraphic zones and cultural components was poor in Zones I-IV; however, it was strong in Zones V-VIII. The cultural affiliation of the features in Table 7.10 is as close as the current level of analysis allows. All cultural material recovered from all features by the smallest excavation provenience is presented in Supplement III to this report. Appendix II contains a summary list of all cultural material in each feature. The reader is referred to these sections for the raw data information.

Ceramic Cluster

Feature 122 from 22IT576 was classed as a ceramic cluster. This was located in the northern extension of the 1979 test pit (100S/112W). The feature consisted of most of one plain grog and shell tempered vessel. The vessel was laying upright just below the plow zone. The upper portion, including the rim, had been removed by the plow leaving the base and initial body segment. No pit outline or other accompanying anomaly could be identified in the surrounding dark organic midden. Eighteen fitting sherds comprised the vessel fragment. Four sherds of other components were removed with the vessel fragment, but are not considered associated with it. They are part of the rich, mixed, midden matrix around the vessel.

Chipped Stone Cluster

Eight chipped stone clusters were encountered in the excavations at the Poplar site (Figure 7.17). Within this feature class, there are two divisions: piles of cultural material and a cache of thinned bifaces ("quarry blades").

The cache of blades (Feature 10) was the only one encountered and was located in Level 5 (Zone II). The feature contained four biface blades (Figure 7.18) and one piece of sandstone (54 g). The blades were approximately 11 cm long and 1 to 5 mm thick. All were twisted at the proximal end and appeared to have been struck from the same core, the blades were lying within a 37 cm area; two were nested together, one was on edge and one was on a slight angle. A discernible outline of a pit or other phenomenon was not observed. No diagnostic temporal markers were associated with this feature. The level of the unit in which the feature was located contained mixed temporal markers from the Middle Woodland (one Satillo Fabric Marked and six eroded sand tempered sherds) and the initial Late Archaic (two Benton Short Stemmed projectile point/knives). The cultural affiliation of this feature is most likely the Benton phase. These features have been documented in association with Benton components at 22IT539 (this report) and other sites in the Upper Tombigbee and Middle Tennessee Valley (Peterson 1980; Webb and DeJarnette 1942). These Fort Payne chert blade caches also have not been documented with any other component in the area.

The remaining chipped stone features were characterized by piles or scatters of chipping debris and broken tools. Two features (9 and 16) were located in the upper levels (5 and 1, respectively). The features and levels contained mixed temporal markers, and based on both position and the latest markers, were considered to be Late Woodland and/or Mississippian phenomena. Feature 9 (Figure 7.19) contained 99 flakes, 21 of which were utilized, scattered within a 28 cm area. Feature 16 was larger (80 cm) and contained 133 flakes of eight different lithologies (dominated by 698 g of ferruginous sandstone) and 50 sherds of all time periods. Upon initial examination, it appeared that the plain sand tempered sherds (36) are from the same vessel; however, total reconstruction has not been attempted. Due to the mixed ceramics and lithics, this feature could be more correctly labeled an artifact cluster. No pit outline or associated stains could be identified with Features 9 and 16.

The remaining five chipped stone clusters (Features 113, 116, 118, 119, and 120), were located in the western portion of Block D in the Early Holocene paleosol in Levels 14, 15, and 16 (79.8-79.5 m AMSL). The cultural affiliation of these features, the Early Archaic Kirk Horizon, is made on the basis of stratigraphic position. While no diagnostic temporal markers were contained

within the features, the integrity of Zone VII is excellent as evidenced in the polygonal soil structure and the presence of only Early Archaic temporal markers throughout the stratum.

The vertical position of the features decreases in numerical order with Feature 113 being the highest. Later it will be shown that Feature 113 appears to be associated with an isolated occupational surface (Early Archaic Lower Assemblage). This latter assemblage is the initial occupation of this site locale.

The largest and most dense of the Early Archaic chipped stone clusters were Features 116 and 118 (Figures 7.20 ad 7.21). These clusters were lying within 2 m and were at the same elevation. Feature 119 was positioned between the concentrations also at the same elevation and may have been a part of Feature 116. The two larger clusters (116 and 118) contained a variety of complete tools including a side scraper, a flake knife, and a core. Additional materials consisted of broken bifaces, utilized flakes and over 200 non-utilized flakes. Both clusters were extememely concentrated and appeared to be piles with little matrix fill. Feature 119, probably part of 116, contained only 33 specimens, including one unidentified tool, and a utilized flake. Feature 120 was a linear arrangement (60 by 20 cm) of a triangular biface, a broken biface, a utilized flake, and one non-utilized flake.

The Early Archaic features appear to be the results of tool production, maintenance, use, and breakage. The concentration of this activity in this portion of the site during these occupations is documented by the absence of these features in other excavation units. It is likely that this part of the site was highest (epicenter) during this occupation.

It should be noted that an additional Early Archaic chipped stone cluster was present in unit 108S/108W of Block D at Level 15 (79.5-79.6 m AMSL). This is the northwest corner of the block. A cluster was not noticed in excavation, however, the 5 cm levels being employed supply sufficient control to reconstruct the feature.

Rock Clusters

Nine rock clusters were identified at 22IT576 (Figure 7.22). These featues were roughly circular and ranged in size from a maximum diameter of 2.42 m to a minimum of 0.09 cm. The rock clusters were characterized by many moderate to well-defined concentrations of unmodified fist-sized pieces of sandstone. Other cultural material is included with the sandstone in seven of the nine rock clusters. This material consisted of ceramics,

chipped stone tools, ground stone tools, flakes, fire cracked chert and fired clay (Figures 7.23 and 7.24). The amount of included cultural material appeared to be related to size of the feature, i.e., the larger the feature, the more diverse the cultural material.

The rock cluster features were concentrated in the western portion of Block D, but two were located in Block B and one in Block A. This pattern is similar to the distribution of the chipped stone clusters. This could indicate a concentration of activity on the highest and central portion of the site.

The cultural affiliation of the rock clusters was difficult as few temporal markers were included in them. Stratigraphic affiliation was also difficult for those in the upper meter of Block D. As can be seen in Table 7.10, when cultural association was possible it ranged from the Middle Archaic through Gulf Formational. Two features, 59 (Figure 7.23) and 109, are firmly Archaic phenomena.

The interpretations of these features are variable, but they were likely part of fire hearths, rock ovens, and refuse deposition. Those associated with fire-related activities are Features 43, 56, 73, and 109. This association was based on the presence of abundant sandstone, hematite, and fire cracked chert and the lack of other types of cultural material. The remaining features were most likely associated with refuse deposition, as a wide variety of tools were present with the sandstone. Features 73 and 76, however, contained only two tools each and much sandstone, and may also have been fire-related features.

Fired Aggregates

Twenty-nine fired aggregate features were encountered at the Poplar site (Figure 7.25). Twenty-three were recovered in Block D, six in Block A, and one in Block B.

These features consisted of dense to diffuse areas of fired silt loam fragments (Figures 7.26 and 7.27). The aggregates averaged 9 cm thick, 48 cm long, and 36 cm wide (1.7 m^2). These features were devoid of artifacts or charcoal and ash. Associating cultural material adjacent to these types of features was quite difficult due to the surrounding dark organic midden which was rich in cultural material.

The highly oxidized, burned orange color of these features suggests intense heat, very likely resulting from very hot fires. These features have been encountered at three sites in this project (22IT539, 22IT590, and 22IT576). The origin of the fired

material has been intensively studied at 22IT539, and it has been demonstrated that the fired material is a silt loam, not native to the site proper. Apparently the silt loam was gathered off-site in the adjacent wetlands and prepared as hearth or fire bases. For further details and descriptions of the soil analysis of these features see Chapter 5 of this report.

The distribution of these features both vertically and horizontally across the site shows definite patterns. The first and strongest pattern is the association of the fired aggregates with the two prepared areas (Figure 7.25, and Features 44 and 49). The prepared areas appear to have been centers of activity and probably were housefloors. Other features such as pits, postmolds, and burials were also directly associated with the prepared areas. These complexes will be integrated in the final section of this chapter. The following fired aggregates were associated with the prepared areas:

<u>Prepared Area, Feature 44</u>

Fired aggregate, Feature 38
Fired aggregate, Feature 42
Fired aggregate, Feature 52
Fired aggregate, Feature 53
Fired aggregate, Feature 75
Fired aggregate, Feature 79

<u>Prepared Area, Feature 49</u>

Fired aggregate, Feature 11
Fired aggregate, Feature 25
Fired aggregate, Feature 46
Fired aggregate, Feature 47
Fired aggregate, Feature 48
Fired aggregate, Feature 58

One cluster of fired aggregates was also observed in the southeast corner of Block D (Features 29, 35, 36, and 67). These were not associated with any known prepared area or other anomaly. Features 82 and 83 may be associated due to their proximity (50 cm) and occurrence at the same elevation. The remaining fired aggregates cannot be directly associated with a feature complex nor do they have any internal consistency. These include Features 8, 14, 15, 17, 28, 45, 61, 77, and 94.

The cultural content of the fired aggregates was low; only two had any diagnostic specimens from a single component (Feature 77 and 38) and both are of questionable association. The primary means of assigning cultural affiliation to these features was by stratigraphic position, radiocarbon dating, and association with

features of known components. The occurrence of 26 of the features of this type is between Levels 5 and 10 (80.5-80.0 m AMSL) in both blocks. This excludes only Features 14, 15, 17, and 94. Levels (6, 8, and 10) have been radiocarbon dated between 5,500 and 6,000 B.P. (Figure 7.16 and Table 7.9). This is consistent with the dates from the fired aggregate features at 22IT539 which had associated Benton projectile point/knives. The distribution of the diagnostic markers at 22IT576 in Levels 5 to 9 (80.3-80.6 m AMSL) shows a low frequency of mixed ceramics and majority of Benton and Sykes-White Springs projectile point/ knife forms. In Block D, Eva, Morrow Mountain, and Sykes/White Springs dominate Levels 9-11 (80.3-80.0 m AMSL) and indicate an earlier, pre-Benton, use of the prepared area, Feature 44. This was also the case at the 22IT539 prepared areas, Features 6 and 120 (see Chapter 5 of this report). Given the nature of the upper 50 cm in Block D, it is expected that later ceramic markers were intruded into the lower layers.

With the radiocarbon dates, stratigraphic position (80.6-80.0 m AMSL), and the similarity of features at 22IT539 where chronological and diagnostic data was firm, it appears that 20 of the fired aggregates are associated with the initial Late Archaic (Benton) component and three are likely aligned with the Middle Archaic (Sykes-White Springs) component (75, 77, and 79). Three fired aggregates are likely of Woodland or Mississippian age (14, 15, and 17) and three are likely Eva-Morrow Mountain (82, 83, and 94). Table 7.10 lists the probable cultural affiliation of all aggregates.

There is little question that the fired aggregates are the result of fires. The nature of the fires (cooking, warmth, etc.) can be addressed but must await further analyses. The use of these particular prepared silt loam bases was most frequent during the Benton component; however, they were utilized from at least the Middle Archaic through the Mississippian stages.

Hearth

Only one hearth was encountered at the Poplar site. Hearths are defined as basin or irregular-shaped, burned areas containing concentrations of charcoal and ash. The hearth at 22IT576 (Figures 7.25 and 7.28) was located just beneath the plowzone. The feature was basin-shaped, 36 cm wide, 62 cm long, 10 cm deep and was composed of grey, burned clay. The dark brown midden fill in the basin contained fiber and sand tempered sherds (8), two ground stone fragments, flakes (13), and sandstone. If this fill is in situ, the feature appears to be associated with the Gulf Formational Stage (Wheeler and Alexander).

A macrobotanical sample from the south half of this feature was analyzed and it produced the following material:

Seeds: 42 spores (<u>Polygonum</u> or <u>Rumex</u>)
5 indeterminate seeds (1 possibly Asteraceae)
18 spores
2 indeterminate seeds

Wood: 0.65 g ring-porous hardwood and diffuse porous oak (<u>Quercus</u>)
0.4 g bark
1.1 g ring porous hardwood and modern residue

The macrobotanical material indicates that the hearth was used for at least the processing of seeds throughout the use of hardwood as firewood.

<u>Prepared Areas</u>

Two prepared areas were encountered at 22IT576: Features 44 and 49, one in Block D and one in Block A (Figure 7.25). Both features were characterized by a mottled yellow, clay loam matrix (Figure 7.30) with areas of clay concentration within. The features were actually a mosaic of fired areas, fired aggregates, and scattered fired pieces. Only one prepared area was completely exposed (Feature 44) and it measured 4.4 by 3.2 m and was 5 to 10 cm thick. The portion of Feature 49 which was exposed measured 5 by 4.6 m and 23 cm thick. The two prepared areas varied in consistency. Feature 44 was not compact, had diffuse edges, and contained much charcoal. Feature 49 was compact throughout, had little charcoal, and the appearance of being cleaned. Both prepared areas had fired aggregates, pits, postmolds, and burials associated with them. They appear to have been centers of intense cultural activity.

The cultural material associated with the features varied considerably. As can be seen in Table 7.11, Feature 49 had much more material than 44. The activities reflected at Feature 49 include tool manufacture (cores and debitage), wood working (scrapers and drills), vegetable food processing (anvilstones, hammerstones), and butchering (projectile point/knives). Much less material was recovered from Feature 44, but several activities are indicated, including butchering, tool production, and cooking.

The cultural affiliation of the prepared ares is made by radiocarbon temporal markers and association. Both features occur within 10 cm (80.40-80.50). The elevation has been dated at 5,551 ±70 (Table 7.9) and Level 8 (80.30-80.40) has been dated at

5,840 ± 120 B.P. The temporal markers associated with Feature 49 are indicative of the Middle and initial Late Archaic (Morrow Mountain, Sykes-White Springs, Benton). The five sherds and 6 g of sherdlets removed with the features likely have been intruded from the upper levels. The prepared areas at 22IT576 are essentially the same features as at 22IT539, Features 6 and 120. These have been firmly dated at between 5,335 and 6,149 B.P. and were associated with Benton and Sykes-White Springs projectile point types (Chapter 5). Based on the above data, the prepared area features at 22IT576 were affiliated with the Benton and possibly Sykes-White Springs.

Pits

Forty-five pits were encountered at the Poplar site during the 1980 excavations. These phenomena included pits, postmolds, and root molds. Pit features were found in all Blocks and one test pit (Figure 7.31). Most occurred in Block D (36), four were identified in Block A, two were in Block B, and three were in Block C.

The cultural material contained in a vast majority of the pits was not different from that contained in the surrounding matrix. Pits were generally characterized by the dark color of the internal fill (Figure 7.32) which contrasted with the lighter colored matrix.

The function of the pits was hard to determine based on the recovered cultural materials within them. There was an interpetive dilemma concerning the function of prehistoric pits. They were probably originally excavated for storage, but have had their original contents removed. These pits were then probably filled with contemporaneous refuse. Therefore, the determination of cultural affiliation and function of the pits was a problem. This was compounded by the poor visibility of pits in the dark midden soil. As can be seen in Table 7.10, 80 per cent of these features (n=36) were recognized in Level 6 or below when the color contrast improved. Detecting the top or upper portion of pits was a continual problem.

The function of most of the pits, in all probability, was storage, processing of foodstuffs, and refuse disposal (Figures 7.29 and 7.33). Carbonized nutshells and charcoal were common in most pits. From the large amount of burned hickory nutshells in pits and incorporated in the midden deposits, it is suspected that hickory nuts were used as fuel in addition to food. In some cases, the cross section outline of pits aid in determining pit function. This was especially true for the five postmolds which were identified.

The pit dilemma was resolved simply by using the data at hand while recognizing that the above problems cannot be controlled. Cultural affiliation was made based on temporal markers, stratigraphic position or association.

In the distribution of pits at 22IT576, several patterns can be detected. These include the following:

1. Pits 40 and 92 are associated with Prepared Area, Feature 44 (Benton-Sykes-White Springs activity center).

2. Features 68 and 69 (postmolds) and 37 are within two meters of the cluster of fired aggregates 29, 35, 36, and 67. This appears to indicate another Benton/Sykes-White Springs residence or activity center.

3. Postmolds 54, 55, and 62 in Block A appear to enclose the Prepared Area (49). Pit 71 is a large pit within this complex. A residential area is stongly indicated here. Feature 71 contained a Sykes-White Springs projectile point/knife, which adds further confirmation of its inclusion in this activity center.

4. Features 4 and 84 in Block B appear to be the results of tree tip-up or other natural phenomena.

5. One pit in Block C (Feature 90) appears to be from the initial Middle Archaic (Eva) based on a diagnostic artifact in the pit fill.

6. Features 19 and 24 cannot be classified due to their presence in the severely mixed upper levels of Block D.

7. Based on stratigraphic position and seriation within each block, the probable cultural affiliation of the remaining pits is listed below (these are individually specified in Table 7.10):

   Benton (Levels 5-8)
   Sykes-White Springs (Levels 9-11)
   Eva-Morrow Mountain (Levels 12-13)
   Kirk (Level 14 and below)

As evidenced by the Prepared Areas and the fired aggregate features, it appears that the Benton-Sykes-White Springs occupation of this site was the most intense of those which remain intact. The cultural difference between the Sykes-White Springs and Benton occupations in the past reality is likely nil. The cultural remains, including the projectile point/knives, appear homogeneous. The intensity of this occupation is reflected in

the number of pit features associated with it (n=32 or 69 per cent). In fact, Pits 91 and 97 may be outside storage pits of the probable residence of Prepared Area Feature 44. A dense concentration of pits from this occupation is in the northwest area of Block D (85, 88, 93, 98, 104, 107, and 108), however, other areas of the block contain pits from this cultural unit.

Six pit features contained no diagnostic artifacts and have been tentatively assigned to the Middle Archaic Eva-Morrow Mountain component on the basis of stratigraphic position (102, 105, 110, 111, 112, 114, and 115). As explained above, the integrity of the paleosol in which they are contained is good. In addition, Eva-Morrow Mountain projectile point/knives are dominant between 79.8 and 80.1 m. Feature 117 is definitely from the Kirk occupation and contained only flakes, some fire cracked chert and small pieces of a variety of lithics, especially ferruginous sandstone and petrified wood.

Macrobotanical samples from five pit features were processed and analyzed (24, 26,71, 85, and 98). The results are presented in Table 7.12. Four of these features were associated with the Benton/Sykes-White Springs component. All contained hickory nutshell, two contained hardwood fragments, and one contained acorn shells. Unusual floral remains included hickory involucres or acorn husks (Feature 26), cane fragments (Feature 85), and Feature 71 contained 15 fern spores, one pokeweed seed, and one yellow star grass seed. Based on this data, a few preliminary deductions can be offered:

1. A closed canopy (spores)
2. Disturbed ground near activity center (grass and pokeweed)
3. Use of cane by occupants
4. Use of acorn and hickory

The pits from the Poplar site contain useful information about the past occupants of the site in the aspects of occupation intensity, subsistence, and paleo-environment. The major drawbacks are the "pit dilemma" and the paucity of cultural material in their fill.

Inhumations and Cremations

Twelve inhumations and three cremations were recovered at the Poplar site. The majority were located in Block D (Figure 7.34), with one inhumation occurring in Block A and test pits 99S/112W and 119S/113W.

Burials were usually discovered by exposure of skeletal parts, identification of an anomaly such as a dark stain, or a concentration of fired silt loam. The average depth of the excavated burial pit (when identified) was 25 cm. The deepest burial pit was 73 cm (Burial 4).

All burials had an initial feature number and the cultural material associated with each individual is listed by feature number (Table 7.10). The complete listing of all material recovered within these features is presented in Supplements II and III and Appendix III of this report.

Of the twelve inhumations, four were flexed, (Figures 7.35 and 7.36), two were extended (Figure 7.37-7.39) and six were of indeterminate position. The skeletal material was always in a very poor condition: soft, friable and often impossible to remove intact. Fragments of eight inhumations were of sufficient size to be aged and/or sexed by the project's physical anthropology consultant, Dr. R. I. Gilbert, Jr. The results of his analysis are presented in Appendix III to this report and summarized in Table 7.13.

The horizontal distribution of the inhumations and cremations indicated a concentration in the western and northeastern portions of Block D (Figure 7.34). The remaining were scattered throughout the site. All cremations are in Block D (Bu 17, 18, and 19).

Burials 7 and 11 can be associated with the Prepared Area Features 49 and 44,respectively. Both were flexed. Burial 11 was in a definite pit, and was located below the prepared area. Burial 7 was within, or perhaps just below, the fired Prepared Area, Feature 49. These could have been house floor burials. Burials 6 and 17 are also likely associated with Prepared Area, Feature 44. Both are located within two meters of the feature and in an area of concentrated pits (Figure 7.31) and fired aggregates (Figure 7.25).

Burial 19, a cremation, is associated with the probable residence or activity center in the southeast corner of Block D. This complex includes pits, postmolds, and fired aggregates.

Burials 12 and 16 have common distinguishing attributes: grave goods and position (Table 7.13). Both are extended and supine. Burial 12 (Figure 7.37) had a cache of stone tools which included an Eva projectile point/knife, a biface flake knife, a utilized flake, and a piece of sandstone (10 g). Burial 16 (Figures 7.38 and 7.39) contained a dog skull oriented perpendicular to the long axis of the body underneath the left pelvis and femur. Burial 16 is associated with the Eva-Morrow Mountain (Middle

Archaic) component due to the similiarity of position and vertical location to Burial 12.

Problems with burial pit identification often made it impossible to determine the surface of origin of the inhumation. This is complicated by the lack of association of clear artifact types. In one case only, Burial 12, was there direct diagnostic association. Of the 12 inhumations, only four pits were detected prior to exposure of bones, and it is not certain whether the tops of these pits were recognized. Therefore, the cultural affiliation of the inhumations was difficult to determine. However, based on the position of the bones, or highest part of the pit, the following vertical patterns were seen;

1. 80.7 to surface - Burials 1, 2, 3, and 4
2. 80.6 to 80.20 - Burials 5, 6, 7, 8, 10, and 11
3. 79.9 to 79.5 - Burials 12 and 16

This distribution can roughly be stratigraphically correlated as upper and mixed (1) and the Benton/Sykes-White Springs component (2). Based on cultural content and similarity in burial form, the third division (3) is likely associated wth the Eva-Morrow Mountain component.

The cremations, especially Burials 17 and 19 were well controlled in initial identification. Burial 17 (Feature 33) had a definite pit (21 cm deep) which was easily discernible by the highly oxidized (orange and red) color and charcoal concentration. The top of the pit was 80.5 m AMSL. This is assumed to be the surface of origination and falls into the Benton/Sykes-White Springs component. Burial 18 appeared to be a highly fired, thin (5 cm), surface (non-pit) cremation. This occurred at the same elevation (80.5 m AMSL) as the Benton component and was considered to be associated with it. Feature 27 (Burial 19) (Figures 7.40 and 7.41) was a questionable cremation. The large pit (99 by 85 by 34 cm) contained a variety of cultural material (ceramics, lithics, bone). The burned human remains were discovered upon zooarchaeological analysis, post-excavation. This feature could well be a refuse pit in which burned human bone was included. The cultural affiliation is impossible to determine due to mixed diagnostics. Fragments of human bone were common in the general midden between 80.3 and 80.7 m AMSL, giving credence to the accidental inclusion explanation for Feature 27.

The inhumations and cremations at 22IT576 were interred during at least during the Middle and initial Late Archaic occupations of the site. The number and distribution appear to reflect the occupational intensity of previously identified activity centers of the intact deposits.

Historic Intrusions

Four historic intrusions were identified below the surface during excavations at the Poplar site (Figure 7.42). One open, recent, amateur's pothole was present during testing and excavations. An oval-shaped depression was also noted as a possible pothole. All intrusions were in Block D. Features 70 and 31 were large (Table 7.10 and Figure 7.42) and difficult to define. Feature 31 likely was a trench-type hole and Feature 70 was oval to irregularly shaped. Both potholes had been filled in with midden soil and were not detected until the base of the dark midden zones (I-V). The discovery of these features was a surprise, as the landowner for 60 years did not recall any extensive digging; in fact, he prevented and discouraged it during his ownership. The subsurface potholes, therefore, must be pre-1920.

The cross-section of Feature 31 was irregular and 80 cm in depth. Feature 70 (Figures 7.43 and 7.44) was conical in cross-section and at least 1.40 m deep. The base was marked by smaller holes throughout.

Feature 13 was identified just below the plowzone and was characterized by compactness, a sandier texture, and lighter color. This feature was probably part of Feature 31.

Feature 20 was actually a charred post or plank 75 cm long and 8-10 cm wide. It was intruded into the ground length-wise at a 60° angle and extended 60 cm into the soil (81.05-80.4 m AMSL). No pit or posthole was detected with the plank or post. One side (facing surface) had been charred while the other was not.

Stains

One stain feature was excavated at the Poplar site. It was circular in outline and lense-shaped in cross-section (9 cm thick). The feature was characterized by a yellow mottling which contrasted with the surrounding dark midden. The feature contained a broken chipped stone tool, an unidentified ground stone tool, two flakes, fired clay (3 g) and sandstone (59 g). This is similar to the surrounding midden material. This type of anomaly was later seen throughout the midden deposits at this and all other sites in the project. Their function was not determined.

ARTIFACT CLASSES

A total of 130,442 counted specimens and 847,183 g of weighed material were recovered in the 1980 excavations of 22IT576. The totals of the artifact classes are listed below:

Ceramics	16,289
Projectile Point/Knives	1,757
Cores, Preforms and Bifaces	470
Miscellaneous Chipped Stone	8,072
Ground Stone	1,735
Non-utilized Debitage	102,119
Introduced Rock	741,727 g
Fired Clay	105,456 g

The presentation of all artifactual material by the smallest provenience is listed in Supplements II and III to this report. Summaries of this material by site excavation block and level are contained in Appendix I and this chapter as previously noted.

This section will discuss the cultural material recovered by artifact class. The divisions within each class will be the most appropriate to present this mass of material.

Ceramics

A total of 16,289 sherds were recovered at the Poplar site. A few patterns have been observed concerning the vertical distribution of the ceramics. Eroded sand tempered sherds and sand tempered plain wares dominated throughout the sequence. In Blocks A, B, and C, Wheeler Plain or Eroded Fiber type sherds ranked second in frequency in all levels, with the exception of Level 1, Block C which contained a greater proportion of Mississippian Plain. Within Block D, Mississippian Plain or Baytown Plain occurred with the second greatest frequency in the upper 20 cm of the site.

Generally, every temper group and major ceramic type occurred within the site. As can be seen in the percentage distributions in each excavation block (Table 7.14), no ceramic component can be isolated stratigraphically. In short, the ceramic horizon was throughly mixed.

The point or level of introduction of ceramics into the site is difficult to access because of the vertical scatter of this material. The level of introduction, however, is estimated to lie at or less than 50 cm below the surfce. This 50 cm zone yielded 87 % of the recovered ceramics. Some horizontal differentiation between ceramic components is suggested based on the frequency of

temper groups recovered from the excavation blocks (Table 7.15). Shell and grog temper wares (Figures 7.45, 7.46, and 7.47) are most frequently represented in Blocks C and D, suggesting that the west-central portion of this site was the focus of Late Woodland and Mississippian occupations or activities.

Although it has been stated that ceramic components cannot be isolated stratigraphically, the presence of a variety of pottery types indicates that the site was occupied during the Gulf Formational, Woodland, and Mississippian periods. The comparatively high frequency (21.44%) of Wheeler series ceramics (Figures 7.48 and 7.49) suggests that the site was frequently or intensely utilized from 1,000 B.C. to 600 B.C.

The reduced frequency (6%) of Alexander series sherds (Figures 7.50 and 7.51) suggests that intensity of site utilization or occupation was less during the Late Gulf Formational period. However, it should be remembered that a portion of the non-diagnostic plain and eroded sand tempered ceramics undoubtedly derive from the Alexander occupation. Without good context of the plain and eroded types, this occupation is difficult to evaluate.

Diagnostic Middle Woodland period ceramics types such as limestone tempered (Figure 7.47) and Furrs Cord Marked (Figure 7.52) occurred in approximately the same frequency as Alexander sherds (6%). Here again the non-inclusion of plain and eroded sand tempered wares probably obscures the actual frequencies of the ceramics representing the Miller I and II components of the site (200 B.C.A.D. 600).

Late Woodland grog and bone tempered types (Figure 7.52) showed an increase over the diagnostic Middle Woodland ceramics. Although the frequency of Late Woodland ceramics may be more than the preceding Middle Woodland, these changes in the frequency or duration of occupation are difficult to interpet because of the differential time spans involved i.e., 800 versus 500 years, and the sand tempered plain problems.

Shell tempered ceramics (6.4%) occurred with about the same frequency as Alexander and Miller I and II diagnostics, and with somewhat less frequency than the Late Woodland grog ware. The dominance of Mississippian Plain hints that the occupation represented by this material dates to the Early Mississippian period (A.D. 1,100-1,250).

Due to the poor context of the ceramic material, the postulation of activities is restricted. Obviously, the folk occupying 22IT576 utilized pottery, probably for cooking and storage. It also is likely that vessels were manufactured at the site.

Additional study may provide information of the mineralogical attributes of the clays used to make the vessels and provide some insight into local manufacture and distribution. Likewise, further analysis of attributes such as form, shape, and decoration may provide additional information of cultural preferences and provide a basis for detailed intersite comparison with the UTV and surrounding regions.

Chipped Stone

Chipped stone artifacts comprised 87 per cent of the modified lithics which were recovered at 22IT576. Within the chipped stone inventory (n=10,299), the major tool groups occurred with the following frequency:

	N	%
Projectile Point/Knives	1,757	17
Cores, Preforms and Bifaces	470	5
Miscellaneous Chipped Stone	8,072	78

Each of these tool groups will be discussed in this section. All categories within each group have been defined in detail in Chapter 4 of this report. To facilitate future reference to and analysis, some categories have been split into varieties which reflect subtle differences in stylistic and/or technological attributes. This was done primarily in the projectile point/knife group. It should be stressed that the standard classification presented in Chapter 4 was used on all specimens and in all tables of the report (e.g. measurement, distribution, etc.). Some categories, upon closer examination, could be subdivided into meaningful varieties (e.g. Benton, Eva). These varieties are presented in the following section with the definitions as the highest level of analysis. Therefore, the consistent and comparable classification is present for the complete project data set, as well as the more refined variety analysis. In the discussions of the following categories, block and level distributions are often included. Table 7.16 presents the correlations of actual elevation with excavation block and level as they differ between all units.

Projectile Point/Knives

All projectile point/knife measurement summary data are presented in Table 7.17. Raw material data are presented in each category description.

<u>Benton</u> $\underline{n}$ = 56 (Figure 7.53)

Comments: The Benton projectile point/knives from 22IT576 were originally classified into the standard previously defined categories of Short Stemmed, Extended Stemmed, and Barbed (Table 7.17 and Appendix I). These specimens were reanalyzed at a later date and grouped into six varieties (A-F) based on technological attributes. Several functinal categories appear to be represented as pointed out in Ahler's report in Appendix III. The more tightly defined varieties are presented below along with the measurements, as the highest level of analysis. The standard classification data are presented in the tables.

<u>Benton, Variety A</u> $\underline{n}$ = 3 (Figure 7.53a, b)

Material:

Heated Camden	1	Ft. Payne	2

Metric Data:

Weight	16 g, n=1	Basal Width	18 mm, n-2
Length	68 mm, n=1	Shoulder Width	27 mm, n=2
Width	28 mm, n=2	Juncture Width	21 mm, n=3
Thickness	7 mm, n=2	Haft Element Length	9 mm, n=2

Discussion: The three specimens that comprise Variant A have very short stems formed by corner removals. Hafting elements exhibit only minimal crushing. Bases have been thinned and beveled (2). Bases on two specimens are incurvate while the third specimen has a straight base. Shoulders range from tapered (2) to straight (1). Blade outlines are straight (triangular) and excurvate. Blade margins have been resharpened (minor) on two specimens. Cross sections are flattened (2) and biconvex (1). Two of these projectile point/knives appear to have been manufactured from flakes. These specimens were recovered in Block D, one from Feature 31, one from Level 7, and one from Level 9.

<u>Benton, Variety B</u> $\underline{n}$ = 15 (Figure 7.53c, d)

Material:

Heated Camden	5	Unheated Camden	1
Ft. Payne	8	Unidentified	1

Metric Data:

Weight	15 g, n=2	Basal Width	20 mm, n=14
Length	55 mm, n=3	Sholder Width	31 mm, n=12
Width	31 mm, n=8	Juncture Width	23 mm, n=14
Thickness	9 mm, n=7	Haft Element Length	12 mm, n=14

Discussion: Variant B includes generally straight stemmed projectile point/knives that have straight (13) to slightly excurvate/asymmetrical bases (2). Bases have been thinned (15) and beveled (6), and hafting elements exhibit only minor crushing or abrasion. Shoulder treatment ranges from tapered (11) to squared (straight) with short barbs (4). Blade margins are asymmetrical as a result of reworking/resharpening. Cross sections are plano-convex (6), biconvex (6), and flattened (3). The specimens in this category resemble those described under Variant A in general form. Eight of the specimens were recovered in Block D, three from Level 1.2B, one from Level 3, four from Level 8, and one in Feature 70; five were recovered in Block A, one each from Levels 7, 8, and 9, and two in Feature 49; one from Block C in Level 7.

Benton, Variety C n = 7 (Figure 7.53e, f):

Material:

Heated Camden	1	Ft. Payne	6

Metric Data:

Weight	15 g, n=3	Basal Width	19 mm, n=5
Length	50 mm, n=3	Sholder Width	31 mm, n=5
Width	32 mm, n=4	Juncture Width	22 mm, n=5
Thickness	9 mm, n=3	Haft Element Length	13 mm, n=4

Discussion: The seven examples that comprise Variant C exhibit straight to slightly contracting stems and incurvate bases. Bases are thinned (5) and beveled (2). Stem margins are sharp (4) or slightly abraded (3). Shoulders are tapered. Blade margins are asymmetrical (6), resulting from resharpening along one edge. Cross sections are biconvex (2), flattened (2), and plano-convex (3). One of these specimens was recovered in Block A Level 6, five from Block D (Levels 3 through 7) and one from Feature 49.

Benton, Variety D n = 6 (Figure 7.53g, h):

Material:

Heated Camden	2	Ft. Payne	4

Metric Data:

Weight	nd	Basal Width	23 mm, n=5
Length	nd	Shoulder Width	31 mm, n=4
Width	32 mm, n=2	Juncture Width	24 mm, n=6
Thickness	14 mm, n=1	Haft Element Length	12 mm, n=5

Discussion: Variant D includes specimens that are characterized by expanding stems and straight bases. Bases are thinned (6) and beveled (5). The margins of hafting elements are abraded (3) or sharp (3). Shoulders are asymmetrical, although most are tapered to some extent. All examples are fragmentary, but blade outlines apparently were asymmetrical as a results of extensive resharpening/reworking. Cross sections are biconvex (2), flattened (2), and plano-convex (2). Distribution included one specimen each from Block D in Levels 2, 6, and 8; Block C in Levels 1 and 3; and Feature 84.

Benton, Variety E n = 10 (Figure 7.53i, j):

Material:

Fossiliferous Bangor	1	Heated Camden	1
Ft. Payne	8		

Metric Data:

Weight	17 g, n=3	Basal Width	22 mm, n=10
Length	66 mm, n=3	Shoulder Width	30 mm, n=5
Thickness	8 mm, n=3	Haft Element Length	11 mm, n=10

Discussion: Variant E projectile point/knives have expanding stems and incurvate bases. Stems are formed by narrow corner removals. The margins of hafting elements range from abraded (4) to slightly crushed (6). Basal tangs are pronounced and range from rounded (3) to pointed (7) in outline. Shoulder treatment is asymmetrical due to resharpening/reworking and both squared (4) and tapered (5) forms occur. Resharpening/reworking is most extensive along one margin of complete (3) specimens. Cross sections are biconvex (2) and flattened (5) on the most complete examples. Distributions are as follows: Block A contained one in Feature 49; Block B contained one in Level 5; Block D contained one in Level 5, two in Level 6, one in Level 7, three in Level 8, and one in Level 9.

Benton, Variety F n = 15 (Figure not illustrated):

Material:

Heated Camden	2	Ft. Payne	12
Unknown	1		

Metric Data:

Weight	15 g, n=2	Basal Width	24 mm, n=5
Length	74 mm, n=2	Shoulder Width	29 mm, n=5
Width	nd	Juncture Width	20 mm, n=8
Thickness	8 mm, n=5	Haft Element Length	13 mm, n=6

Discussion: The final variant (F) includes projectile point/knives that could not be classed in one of the above groups, but have been retained (provisionally) in the Benton category. A wide range of forms is encompassed by this miscellaneous variety. The majority of projectile point/knives included have been extensively modified through resharpening/reworking or breakage, thereby making thorough classification difficult. Of the 15 specimens included in Variant F, twelve were recovered form Block D, one in Feature 70, one in Level 1.2 B, three in Level 5, three were in Level 6, one in Level 7, and three in Level 8. Block A contained one variety F in Feature 49. Block B contained one in Level 5, and Block C contained one in Level 1.

<u>Big</u> <u>Sandy</u> <u>n</u> = 2 (Figure 7.54a, b):

Material:
Heated Camden 2

Metric Data: Table 7.17*
* Measurements from specimen 4569-1 missing.

Discussion: The two fragmentary specimens included in this category exhibit broad, relatively deep side-notches, heavily ground incurvate bases, squared tangs, and straight to slightly excurvate blade edges. Both specimens appear to have been extensively reworked prior to breakage. The cross section on one example is plano-convex; that of the other point is not determinable. One specimen exhibits a possible impact fracture, (b). This hafted biface was recovered from Level 16 (79.5-79.6 m AMSL) in Block D. The blade of the second point is broken and exhibits a lateral snap fracture (a). This artifact was excavated from Level 15 in Block D. Levels 15 and 16, Block D, contain an Early Archaic Period component.

Big Slough $\underline{n}$ = 1 (Figure 7.55e):

Material:
Heated Camden 1

Metric Data: Table 7.17

Discussion: This specimen is straight stemmed with an excurvate base and rounded tangs. Stem margins exhibit only minor crushing. Shoulders are squared and a barb is present on one side. Blade margins are straight and slightly incurvate. Blade edges are sinuous, one margin has been extensively resharpened, and is beveled in cross section; the entire blade has been reworked from a larger form. The cross section is roughly biconvex. This specimen was recovered in Level 1.3C of Block D.

Bradley Spike $\underline{n}$ = 2 (Figure 7.55b):

Material:
Heated Camden 1 Ft. Payne 1

Metric Data: Table 7.71

Discussion: This category is comprised of two specimens that have contracting stems, only one defined shoulder, and extensive resharpening/reworking that is concentrated along one blade margin. One of these specimens has had one blade edge removed by a burin spall that originated at the tip. In both instances, the modification of one edge may have served as a "backing" to support use of the second margin. The single shoulder on each is tapered. Stem margins have been crushed. Blade margins are asymmetrical and form generally narrow, triangular outlines. Tips are rounded. Cross sections are biconvex to rhomboidal. The base of one specimen is broken and unthinned, while the second example is excurvate and thinned. These specimens were recovered from Levels 2 and 5 in Block D. Both forms may have been used as knives, or perhaps secondarily as perforating/graving implements.

Collins $\underline{n}$ = 1 (Figure 7.55a):

Material:
Heated Camden 1

Metric Data: Table 7.17

Discussion: This specimen has a straight stem and base. The base retains the faceted cortex which apparently served as the plat-

form for manufacture of the initial flake/blank. The base exhibits minor thinning. Stem margins have been ground. The shoulders are squared and the blade margins are straight. This specimen has been resharpened/reworked. The tip is acute. The cross section is thick and biconvex. This projectile point/knife was recovered from Level 1.1A of Block D.

<u>Cotaco Creek</u> <u>n</u> = 2 (Figure 7.55f):

Material:

Heated Camden	1	Ft. Payne	1

Metric Data: Table 7.17

Discussion: The two projectile point/knives included here have relatively broad blades and asymmetrical hafting elements. Bases are excurvate or incurvate, and with the exception of one basal margin which is sharp, stem margins have been crushed. Stems are formed by broad corner notches which have removed the proximal corners on both examples. Shoulders and blade margins are asymmetrical. Both specimens have been resharpened/reworked. Thinning of the blades was accomplished by broad, random flake removal. Cross sections are flattened and plano-convex. These projectile point/knives were recovered in Block D, Levels 2 and 6.

<u>Cypress Creek</u> <u>n</u> = 2 (Figure 7.55m):

Material:
Heated Camden 2

Metric Data: Table 7.17

Discussion: These specimens (one fragmentary) are of moderate size with broad stems formed by corner notching. The complete specimen has a straight base and stem margins which exhibit only minor crushing. Shoulders are inversely tapered to slightly barbed. Blade margins are incurvate or asymmetrical. The broken projectile point/knife is finely serrated and one blade margin is beveled. The cross section of the complete example is biconvex. Distributions are: Block D, Level 9; Block A, Level 2.2.

Dalton *n* = 2 (Figure 7.56n):

Material:
Heated Camden 2

Metric Data: Table 7.17

Discussion: Both examples in this category are fragmentary and were recovered from mixed stratigraphic contexts including a pothole fill (Feature 31) and Level 1.2B of Block D. One specimen has been extensively reworked. Bases are incurvate and the widest dimension occurs along the base in each instance. The hafting areas vary, as one specimen has a squared, nearly parallel sided stem that ends in pointed tangs, while the second example has a slightly constricted stem that expands to form broad, squared tangs. The latter point has a heavily ground base and the stem has been thinned by a large, channel-like flake removal on each face. This projectile point/knife resembles descriptions of the Greenbrier Dalton variety (DeJarnette *et al.* 1962:57), but also overlaps with descriptions of other early dating point forms, such as Quad (cf. Rolingson 1964: Figures 13, 18, and 43). The second specimen in this category is similar to either the Nuckolls or Colbert Dalton variants (DeJarnette *et al.* 1962:65, 51).

Elora *n* = 3 (Figure 7.55g):

Material:
Heated Camden 1 Ft. Payne 1
Pickwick 1

Metric Data: Table 7.17

Discussion: The three specimens included in this category have straight stems and bases. The bases are broad and flattened and one consists of the original cobble cortex. Two of these specimens have bases with the "intentionally broken appearance" described by Cambron and Hulse (1975:46). Some attempt has been made to thin the bases of all three examples. Stem edges have been crushed. Shoulders are tapered and blade margins are asymetrical. All three projectile point/knives have been resharpened/reworked. Cross sections are biconvex. These specimens were recovered within Levels 2 and 7 in Block D and Level 9 in Block C.

Eva n = 27 (Figure 7.57g-n):

Comments: The 27 specimens included in the Eva category are presented as a unit in Table 7.17 and are divided into three variants below. Six specimens are grouped into Variant A, 19 comprise Variant B, two specimens comprise Variant C. All variants exhibit basal notching, an attribute that separates this category from other Middle Archaic forms such as Morrow Mountain (Coe 1964:37, 43; see also Brookes 1979:42).

Eva, Variety A n = 6 (Figure 7.57g-h):

Material:

Heated Camden	3	Ft. Payne	1
Unheated Camden	1	Pickwick	1

Metric Data:

Weight	10 g, n=1	Basal Width	12 mm, n=3
Length	40 mm, n=1	Shoulder Width	33 mm, n=5
Width	35 mm, n=5	Juncture Width	16 mm, n=6
Thickness	11 mm, n=5	Haft Element Length	6 mm, n=2

Discussion: Variant A is comprised of medium-sized specimens (Block D, n=5; Block C, n=1), with barbed shoulders and straight to contracting (pointed) hafting elements. Bases are straight to excurvate and generally thinned. Broad, deep basal notches produce well-defined shoulders and relatively narrow stems. Blades are triangular in outline with irregular margins ranging from excurvate to asymmetrical to straight. All Variant A examples have been extensively resharpened. Broad, collateral flake removals are characteristically irregular. One specimen was recovered from Feature 84 in Block C; the others were from Block D, two from Level 1.2c and one each from Levels 6, 8, and 12.

Eva, Variety B n = 19 (Figure 7.57i-m):

Material:

Heated Camden	17	Unheated Tuscaloosa	1
Unheated Camden	1		

Metric Data:

Weight	11 g, n=3	Basal Width	18 mm, n=15
Length	46 mm, n=5	Shoulder Width	34 mm, n=10
Width	35 mm, n=10	Juncture Width	19 mm, n=16
Thickness	9 mm, n=10	Haft Element Length	7 mm, n=16

Discussion: The 19 Variant B specimens include eight from Levels 9-10 and one from Feature 77 in Block D. Three others wre recovered from Block D, one from Level 1.2C and two from Level 5, and are inferred to be out of context. These Block D specimens are the basis of the Variant B description. These medium-sized point are characterized by short, medium to wide hafting elements produced by basal notching. Stems contract slightly and the bases are straight to slightly excurvate, thinned, and normally abraded (8). Shoulders are straight to incurvate, but asymmetrical forms do occur. The shallow to medium depth of basal notching on this variant produces a corner-removed form when the notch originates from the base near its junction with the lateral margins. Cross sections are biconvex (9).

Two specimens recovered from Level 10 in Block A conform to the Variant B description and their stratigraphic position can be correlated to the Block D sample. Five Variant B specimens were recovered from Block C: two specimens are in the upper mixed levels, two are in correct stratigraphic position (Levels 7 and 9), and one was recovered from Feature 90.

<u>Eva, Variety C</u> <u>n</u> = 2 (Figure 7.57n):

Material:

Heated Camden	1	Unidentified	1

Metric Data:

Weight	12 g, <u>n</u>=1	Basal Width	19 mm, <u>n</u>=1
Length	50 mm, <u>n</u>=1	Shoulder Width	33 mm, <u>n</u>=1
Width	34 mm, <u>n</u>=1	Juncture Width	19 mm, <u>n</u>=1
Thickness	10 mm, <u>n</u>=2	Haft Element Length	4 mm, <u>n</u>=1

Discussion: A single fragmentary specimen and one whole specimen have been segregated as Variant C. The fragmentary projectile point/knife was recovered from Level 9 in Block B. The other was recovered from Feature 121, Burial 12 in Block D. The overall size of this specimen is larger than that of the previously defined varieties. Small basal notches produced a wide and very short hafting element. The base and one notch are abraded. Blade edges are excurvate and the cross section is biconvex.

<u>Flint River Spike</u> <u>n</u> = 1 (Figure 7.55c):

Material:
Pickwick 1

Metric Data: Table 7.17

Discussion: The single example of this category resembles those classified as Bradley Spike projectile point/knives. This specimen is generally lanceolate in outline with an excurvate, thinned base. A slight constriction of the margins located approximately one-third of the length of the projectile point/knives from the base may represent the hafting element. No shoulders are apparent. The blade margins are asymmetrical and have been extensively resharpened/reworked producing a strong midline ridge on both faces. The cross section is diamond-shaped. This projectile point/knife was recovered in Block D, Level 2. It was probably used as a cutting implement (knife) with possible secondary use as a perforator or graver.

Gary $\underline{n}$ = 3 (Figure 7.57d):

Material:
Heated Camden 3

Metric Data: Table 7.17*
*One specimen not measured.

Discussion: This category is comprised of three contracting stemmed, moderate to small-sized projectile point/knives. Bases are slightly excurvate and stem margins exhibit minor crushing (2) or abrasions (1). Hafting elements have been thinned. Shoulders are asymmetrically tapered (2) and squared (1). Blade margins are straight (1) and excurvate (1); the third example is broken but appears to have been asymmetrically resharpened. All projectile point/knives have been extensively resharpened/reworked along one blade margin. Cross sections are plano-convex (2) and biconvex (1). All three examples of this category were derived from Block A, two from Level 1 and one from Level 2.

Greenbrier $\underline{n}$ = 2 (Figure 7.54c, d):

Material:
Heated Camden 1 Unheated Camden 1

Metric Data: Table 7.17

Discussion: The two fragmentary specimens in this group have ground bases and hafting elements. Bases are incurvate or straight, and one example has an alternately beveled blade. Although a tang is broken, the base of the latter specimen would have formed the widest dimension. Notches on both are broad and deep, and originate from the lateral edge. Cross sections are

rhomboidal and biconvex. One specimen was recovered in Level 15 and the other in Level 7 of Block D; the latter projectile point/knive is considered to be out of context.

Kirk Corner-Notched n = 30 (Figure 7.54):

Comments: The projectile point/knives included in this category are presented in Table 7.17 and Appendix I. They are considered to be part of an Early Archaic, corner-notched complex. Ten specimens were used for the variety descriptions of this category and were all derived from the Block D excavation unit at 22IT576. Nine of these examples were recovered from within or below Level 11 and are considered to be in a proper stratigraphic context. One specimen from a feature was also used in the definitions. A large number (17) of the Kirk Corner-Notched were recovered from higher levels: Block D, Levels 1, 2, 4, 5, and 7; Block C, Levels 1 and 2; Block B, Level 9; and Block A, Levels 1, 4, and 8. But these appear to be out of stratigraphic context. One was found in each of these potholes, Feature 84 and Feature 31.

Three varieties (A-C) of Kirk hafted bifaces are discussed below. The subdivision of this category is based primarily on the morphology of hafting elements.

Kirk, Variety A n = 5 (Figure 7.54e-i):

Material:

Heated Camden	4	Unidentified	1

Metric Data:*

Weight	8 g, n=3	Basal Width	24 mm, n=3
Length	49 mm, n=3	Shoulder Width	28 mm, n=3
Thickness	8 mm, n=4	Juncture Width	19 mm, n=4
		Haft Element Length	9 mm, n=3

*One specimen was not measured.

Discussion: Variant A is comprised of specimens of moderate size, with heavily ground, straight to slightly excurvate bases. U-shaped notched are narrow to medium in width and lateral stem margins are abraded to slightly ground. The oblique orientation of the notches produces an expanding stem that is slightly narrower than the width of the shoulders. Shoulders are barbed or inversely tapered. Blade margins are straight and alternately beveled. Three examples are serrated. Cross sections are rhomboidal. The alternate edge beveling noted on these and other projectile point/knives probably is the result of resharpening conducted while the specimen was hafted. Resharpening thus would

have required "flipping" the hafted biface to reduce two edges, rather than rotating the piece in order to facilitate flake removal on both faces. Distributions of the four complete specimens are: Block D, Levels 15 (2) and 16 (2). A fifth broken specimen included in this category was recovered from Block D, Level 16. This specimen has been provisionally retained in Variant A even though the stem is incomplete.

Variant A projectile point/knives could be considered to be initial and advanced stage Decatur points recovered from the Hester site (Brookes 1979:36-37; Plate 15; Figure 27e-h). Although the initial type description (Cambron 1957:17) includes a fracture base attribute, Brookes (1979:36) observes that 40% of the sample lacks this characteristic. None of the Variety A bases are fractured.

Kirk, Variety B n = 2 (Figure 7.54j-k):

Material:
Heated Camden 2

Metric Data:

Width	38 mm, n=2	Thickness	9 mm, n=1

Discussion: Variant B is comprised of specimens that are of moderate size and have excurvate, abraded to slightly ground bases. Small oblique notches, approaching a lateral orientation, have been struck at or slightly above the juncture of the lateral and basal margins. Blade margins are straight to slightly incurvate. One specimen is serrated. Shoulders are poorly defined and tapered. Maximum width dimensions occur at the bases of these specimens, which along with the morphology of the shoulders is the result of resharpening/reworking of blade margins. Cross sections are biconvex. Both projectile point/knives are from Level 14 in Block D.

Variety B hafted bifaces resemble the Autagua point described and illustrated by Brookes (1979:37; Plate 22g; Figure 25). This type is considered by Brookes (1982: personal communication) to represent an advanced stage of the Pine Tree projectile point/knives.

Kirk, Variety C n = 3 (Figure 7.54l-n):

Material:
Heated Camden 3

Metric Data:*

Width	33 mm, _=1
Basal Width	24 mm, n=1
Shoulder Width	32 mm, n=1
Juncture Width	21 mm, n=2
Haft Element Length	11 mm, n=2

*One specimen was not measured.

Discussion: The third corner-notched group (Variant C) includes three fragmentary specimens. This variety resembles specimens in Variant B. Two specimens were recovered from a higher stratigraphic position within the site, Block D, Level 11, and one specimen occurred in Feature 96 of Block D. Bases are excurvate and lateral stem margins are ground (2) or abraded (1). Deep, narrow corner notches have produced inversely tapered shoulders; basal tangs are rounded. Blades on all three examples are broken, but appear to have been straight (triangular) to excurvate. Cross sections are biconvex. Thinning extends across both faces, producing thin cross sections.The separation of these specimens into Variant C is provisional pending further analysis.

Variety C specimens, as noted, are principally separated from Variety B on the basis of stratigraphy. Variety C points, although broken, appear to be less reworked than Variety B. Variety C projectile point/knives appear to compare with Pine Tree type points recovered from the Hester site (Brookes 1979:38-39; Plate 18; Figure 26).

Kirk, Variety Other n = 20 (Figure not illustrated):

Material:

Heated Camden	15	Ft. Payne	4
Unidentified	1		

Metric Data:

Weight	9 g, n=9	Basal Width	22 mm, n=15
Length	41 mm, n=9	Shoulder Width	28 mm, n=12
Width	28 mm, n=13	Juncture Width	19 mm, n=18
Thickness	9 mm, n=15	Haft Element Length	10 mm, n=15

Discussion: These specimens are the remaining specimens other than the ten used for the variety definition. These specimens fall within the general category description presented in Chapter 4 of this report.

The twenty specimens in the "other" variety of the Kirk type were distributed throughout the site. Block A had one in Level 1, two in Level 4, and one in Level 8; Block B had one in Level 9; Block C had one in Level 1 and one in Level 3; and Block D contained 10

specimens, one in Level 1.2B, two in Level 2, three in Level 4, two in Level 5, and two in Level 7. Three specimens were contained in features: two in Feature 31 and one in Feature 84.

Late Woodland/Mississippian Triangular n = 152
(Figure not illustrated)
Comments: These projectile point/knives are small and generally triangular in outline. The points have been grouped into varieties based largely on the morphology of the base.

Late Woodland/Mississippian Triangular Variety A n = 89
(Figure 7.49e-h,m):

Material:

Heated Camden	74	Ft. Payne	2
Pickwick	1	Heated Tuscaloosa	12

Metric Data:

Weight	1 g, n=33
Length	20 mm, n=33
Width	15 mm, n=75
Thickness	4 mm, n=68
Basal Width	15 mm, n=71

*One specimen not measured or entered.

Discussion: Variant A is characterized by a shallow to deep excurvate base. Blade margins are slightly excurvate, straight, incurvate or asymmetrical. Variant A point are concentrated in Block D Level 1, with 55 recovered there: eight from Level 1.1A, nine from Level 1.2B, 13 from Level 1.1B, 18 from Level 1.2C, and seven from Level 1.3C. The other 22 specimens ranged from levels two through nine. One was found in each of Features 15 and 24 and two were found in each of Features 31 and 70. Block A included four in Level 1 and Block C included one each in Levels 1 and 2; these are the only specimens recovered outside Block D.

Late Woodland/Mississippian Triangular, Variety B n = 34
(Figure 7.49i-j, n-p):

Material:

Heated Camden	25	Unheated Camden	2
Pickwick	1	Unheated Tuscaloosa	6

Metric Data:

Weight	1 g, n=7

Length 19 mm, n=9
Width 15 mm, n=30
Thickness 4 mm, n=26
Basal Width 15 mm, n=30

Discussion: Variant B exhibits a straight base. Blade margins are excurvate, straight, incurvate or asymmetrical. These points were recovered principally in Levels 1 through 4 of Block D or the upper 40-50 cm of the site. Nineteen were recovered in Level 1 (eight in 1.1A, one in 1.1B, three in 1.2B, four in 1.2C, and three in 1.3C), and 11 were recovered in Levels 2-4. One was recovered from each of Features 23 and 70 and two from Feature 27.

Late Woodland/Mississippian Triangular, Variety C n = 8 (Figure 7.49k-1):

Material:
Heated Camden 8

Metric Data:
Weight 3 g, n=5
Length 19 mm, n=5
Thickness 4 mm, n=7
Basal Width 13 mm, n=6

Discussion: Variant C is characterized by an excurvate base. Blade margins are usually excurvate (6); two specimens have been resharpened to pentagonal forms. All of the Variant C points were recovered from Block D, three from Level 1.1A, two from Level 1.1B, one from Level 1.3C, and one each from Levels 3 and 8.

Late Woodland/Mississippian Triangular Variety D n = 21 (Figure not illustrated):

Material:
Heated Camden 13 Pickwick 1
Heated Tuscaloosa 7

Metric Data:*
Weight 1 g, n=2
Length 25 mm, n=1
Width 16 mm, n=9
Thickness 4 mm, n=14
Basal Width 16 mm, n=8
*Four specimens not measured.

Discussion: Variant D (n=21) is a miscellaneous class containing preform-like specimens and broken points that did not exhibit sufficient attributes to permit assignment to one of the above classes. All were recovered from Block D. Ninteen of the points were found in Levels 1.1A through 5, one example was recovered from Feature 31, and one was recovered from the surface pothole backfill.

Ledbetter/Pickwick *n* = 13 (Figure 7.55h-i):

Material:

Heated Camden	4	Ft. Payne	7
Tallahatta Quartzite	1	Unheated Tuscaloosa	1

Metric Data: Table 7.17

Discussion: This category includes 13 moderate to large projectile point/knives that have straight (7), slightly expanding (3), or slightly contracting (3) stems. Stems are formed by broad corner notches which remove the proximal corners of these specimens. Bases are straight (7) to slightly excurvate (7) and stem margins are either crushed (minor) or abraded. Shoulder treatment ranges from squared (4) to tapered (1) to inversely tapered (3). Blade margins are generally asymmetrical and have been resharpened/reworked (most extensively) along one edge. Cross sections are biconvex (9) and plano-convex (4). Distributions are: Block D, one each from Levels 1.1A, 1.1B, 1.2C, and 6, and two from Level 2; Block A, one each from Levels 2 and 8; Block B, one each from Levels 1, 2, and 4; Block C, one from Level 3.

Limestone *n* = 2 (Figure 7.55j):

Material:
Ft. Payne 2

Metric Data: Table 7.17

Discussion: The two fragmentary specimens in this category are characterized by expanding stems, straight bases, and squared tangs. Stem margins are abraded. Shoulders are tapered and both specimens appear to have been resharpened/reworked prior to fracture. Cross sections are biconvex. These projectile point/knives were recovered from Levels 1.1A and 3 in Block D.

Little Bear Creek/Flint Creek $\underline{n}$ = 186 (Figure 7.58)

Comments: Both Flint Creek and Little Bear Creek projectile point/knives were identified in the 22IT576 collection and their measurments are presented in Table 7.17 and distributions are in Appendices I and II. Overlap in sorting criteria is a problem with these two types and upon closer examination were combined in an effort to better classify these specimens. With the accumulation of data on the UTV, it is apparent that both forms overlap in time and span a period of late preceramic (Late Archaic) and early ceramic-bearing (Wheeler/Alexander) occupations. At present, there is some suggestion that Flint Creek and Little Bear Creek forms are part of a point complex, perhaps encompassing such forms as Bakers Creek, Cotaco Creek, Smithsonia, Kays Stemmed, and Mulberry Creek (described in Cambron and Hulse 1975).

The combined specimens have been subdivided into eight variants which are described below. Reference to defined type categories will be made whenever possible, although exhaustive comparisons have not been attempted. The descriptions of the varieties identified in the 22IT576 sample generally conform to those presented for this category in the analysis of 22IT590 projectile point/knives (see Chapter 8).

Little Bear Creek/Flint Creek, Variety A $\underline{n}$ = 15
(Figure 7.58a, b):

Material:

Heated Camden	11	Fossiliferous Ft. Payne	1
Tallahatta Quartzite	1	Heated Tuscaloosa	1
Unidentified	1		

Metric Data:*

Weight	9 g, $\underline{n}$=6	Basal Width	12 mm, $\underline{n}$=11
Length	44 mm, $\underline{n}$=7	Shoulder Width	23 mm, $\underline{n}$=10
Width	24 mm, $\underline{n}$=5	Juncture Width	15 mm, $\underline{n}$=10
Thickness	10 mm, $\underline{n}$=10	Haft Element Length	12 mm, $\underline{n}$=11

*One specimen was not measured.

Discussion: Variant A is comprised of small to moderate-sized specimens, characterized by slightly contracting to straight, narrow stems. Bases on these specimens are straight (10) to slightly excurvate. The margins of hafting elements are either crushed or abraded. Broad corner removals have produced relatively long stems and tapered (12) to squared (2) shoulders. The majority of projectile point/knives have asymmetrical shoulders and blades resulting from resharpening/reworking, usually concentrated along one margin. Cross sections are biconvex (7), plano-

convex (3), and flattened. Eleven of the fifteen Variant A projectile point/knives were recovered from the upper five levels in Block D: one each from Levels 1.1B and 1.2C, two each from Levels 1.2B and 1.3C, one each from Levels 2, 3, and 5, and two from Level 4. One of the other four was from Block C, Level 4, and the remaining were from Block B, one from Level 2 and two from Level 3.

Little Bear Creek/Flint Creek, Variety B1 n = 22
(Figure 7.58c, d):

Material:

Heated Camden	17	Ft. Payne	4
Tallahatta Quartzite	1		

Metric Data:

Weight	20 g, n=7	Basal Width	16 mm, n=18
Length	53 mm, n=7	Shoulder Width	25 mm, n=16
Width	25 mm, n=15	Juncture Width	17 mm, n=21
Thickness	11 mm, n=13	Haft Element Length	12 mm, n=18

Discussion: The projectile point/knives that are included in Variant B Have been subdivided into two groups (B1 and B2) based on the presence/absence of cortex (and platforms) on the base. Those specimens included in Variant B1 have cortex/platforms on their bases, but otherwise resemble Variant B2 projectile point/knives. Variant B1 specimens have straight stems with straight to excurvate bases. Lateral stem margins are crushed to abraded. Shoulders are predominatly tapered, although straight shouldered examples (3) do occur. Blade margins are asymmetrical (13), straight (4), or excurvate (4). Five examples are serrated. Most specimens have been resharpened/reworked, usually along one margin. Cross sections are biconvex (14), flattened (3), and plano-convex (4). Distributions are as follows: twenty were recovered Block D, two each from Levels 1.1B and 1.3C, four from Level 2, three each from Levels 3, 4, and 5, and one each from Levels 6 and 8 and Feature 23; one was recovered from Block A, Level 2; one was recovered from Block B, Level 4.

Little Bear Creek/Flint Creek, Variety B2 n = 55
(Figure 7.58e, f):

Material:

Heated Camden	38	Unheated Camden	4
Ft. Payne	5	Fossiliferous Ft. Payne	1
Pickwick	2	Tallahatta Quartzite	2
Heated Tuscaloosa	1	Unidentified	2

Metric Data:

Weight	13 g, n=16	Basal Width	15 mm, n=49
Length	58 mm, n=16	Juncture Width	17 mm, n=53
Width	24 mm, n=41	Shoulder Width	24 mm, n=44
Thickness	11 mm, n=40	Haft Element Length	13 mm, n=48

Discussion: Variant B2 projectile point/knives have straight (24), slightly excurvate (29), or incurvate (1) thinned bases and expanding stems. Shoulders are tapered (4), square (5), or asymmetrical (5). Blade margins are excurvate (10), straight (6), and asymmetrical (36) in outline; 20 examples are serrated. Cross sections are biconvex (38), flattened (2), and plano-convex (12); two specimens have medial ridges that produce diamond cross sections.

Forty four of the specimens were recovered from Block D, Levels 1 through 9: five from Level 1.1A, one from Level 1.1B, nine from Level 1.2B, one from Level 1.2C, six from Level 1.3C, six each from Levels 2 and 3, four from Level 4, three from Level 5, and one each from Levels 6, 7, and 9. Two were recovered from Block C, Level 3. Four were recovered from Block B, Level 1 and one each from Levels 2 and 3. In Block A, one was recovered from Level 1 and two from Level 2. As indicated above the projectile point/knives included in Variant B2 resemble Variant B1, but have additional tertiary flaking on hafting elements.

Little Bear Creek/Flint Creek, Variety C n = 5 (Figure 7.58g, h):

Material:

Heated Camden	3	Heated Tuscaloosa	2

Metric Data:*

Weight	12 g, n=2	Basal Width	13 mm, n=5
Length	55 mm, n=3	Shoulder Width	24 mm, n=4
Width	25 mm, n=4	Juncture Width	14 mm, n=5
Thickness	10 mm, n=3	Haft Element Length	12 mm, n=5

* One specimen was not measured.

Discussion: The specimens in Variant C are characterized by slightly expanding (bulbous) stems and excurvate base. These projectile point/knives are of moderate size and cortex remnants are present on the bases of three specimens. Hafting elements exhibit minor crushing. Shoulders are tapered and blade outlines are asymmetrical (3) and excurvate (1). Three examples have been extensively resharpened/reworked. Cross sections are bionvex (3), flattened (1), and plano-convex (1). One specimens was recovered from Block A, Level 1. In Block D two specimens were recovered from Level 1.2B and one each from Levels 5 and 8.

Little Bear Creek/Flint Creek, Variety D *n* = 20 (Figure 7.58i,j):

Material:

Heated Camden	15	Unheated Camden	1
Ft. Payne	3	Heated Tuscaloosa	1

Metric Data:

Weight	12 g, *n*=9	Basal Width	16 mm, *n*=16
Length	52 mm, *n*=9	Shoulder Width	25 mm, *n*=13
Width	25 mm, *n*=12	Juncture Width	15 mm, *n*=20
Thickness	11 mm, *n*=14	Haft Element Length	12 mm, *n*=17

Discussion: Variant D is comprised of specimens that have straight to expanding stems and bases, many of which (16) retain cortex/platform remnants on the bases. This variety contains some of the largest specimens (overall size) in this category. Broad corner notches produce relatively long stems and interior notch areas reveal only minor tertiary flaking or secondary modification. This produces hafting elements with an "unfinished" appearance.

Lateral stem margins range from sharp (3) to abraded (17). Shoulders are tapered (14) or squared (6). Blade margins are excurvate (4), asymmetrical (11), or straight (1). For specimens ar serrated. The majorty of specimens (12) exhibit extensive resharpening/reworking along one blade margin. Cross sections are biconvex (12), plano-convex (7), and flattened (1). Two specimens were recovered from Block C, one each in Levels 9 and 10. The other eighteen were recovered from Block D: two from Level 1.1A, one from Level 1.1B, four from Level 1.2B, two from Level 1.2C, three from Level 1.3C, two from Level 2, and one each from Levels 3, 4, 5, and 6.

Little Bear Creek/Flint Creek, Variety E *n* = 50 (Figure 7.58k, l):

Material:

Heated Camden	46	Unheated Camden	1
Ft. Payne	2	Pickwick	1

Metric Data:

Weight	12 g, *n*=10	Basal Width	17 mm, *n*=42
Length	52 mm, *n*=11	Shoulder Width	23 mm, *n*=36
Width		Juncture Width	15 mm, *n*=50
Thickness	11 mm, *n*=32	Haft Element Length	12 mm, *n*=42

Discussion: Specimens included in Variant E have expanding stems and excurvate bases. Bases are thinned and range from sharp (7) to crushed/abraded (40) along lateral margins. Shoulder treatment ranges from squared (16) to tapered (15) to asymmetrical (16).

Blade margins are asymmetrical (19), excurvate (5), or straight (3); 10 specimens are serrated. The majority of examples included here have been extensively resharpened/reworked along one blade margin. Cross sections are biconvex (32), plano-convex (9), or flattened (1). Thirty nine of the specimens were recovered from Block D: four from Level 1.1A, three from Level 1.1B, eight from Level 1.2B, five from Level 1.2C, three from Level 1.3C, five from Level 2, four each from Levels 3 and 4, two from Level 5, and one from Level 6. Block C contained three specimens, one each from Levels 2, 4, and Feature 84. Levels 1 through 4 and Feature 6 in Block B each contained one specimen. Two specimens were recovered from Level 1 and one specimen from Level 2 in Block A.

<u>Little Bear Creek/Flint Creek, Variety F</u> <u>n</u> = 1 (Figure 7.58m):

Material:
Ft. Payne 1

Metric Data:

Width	28 g, <u>n</u>=1	Shoulder Width	26 mm, <u>n</u>=1
Thickness	9 mm, <u>n</u>=1	Juncture Width	18 mm, <u>n</u>=1

Discussion: Variant F includes a single specimen that has a contracting stem and a slightly excurvate base retaining a remnant of the original cortex/platform. Stem edges are slightly crushed. Shoulders are tapered and blade margins are excurvate. This specimen has been alternately beveled through resharpening, which produces a flattened, rhomboidal cross section. This projectile point/knife was recovered from Level 3 in Block A.

<u>Little Bear Creek/Flint Creek, Variety G</u> <u>n</u> = 14 (Figure 7.58n, o):

Material:

Heated Camden	11	Ft. Payne	2
Unheated Tuscaloosa	1		

Metric Data:

Weight	16 g, <u>n</u>=4	Basal Width	12 mm, <u>n</u>=11
Length	64 mm, <u>n</u>=4	Shoulder Width	27 mm, <u>n</u>=10
Width	27 mm, <u>n</u>=10	Juncture Width	17 mm, <u>n</u>=14
Thickness	11 mm, <u>n</u>=10	Haft Element Length	13 mm, <u>n</u>=11

Little Bear Creek/Flint Creek, Variety H n = 4
(Figure 7.58p, q):

Material:

Heated Camden	3	Ft. Payne	1

Metric Data:

Width	29 mm, n=2	Basal Width	12 mm, n=2
Thickness	11 mm, n=2	Shoulder Width	29 mm, n=2
Juncture Width	19 mm, n=2	Haft Element Length	12 mm, n=2

Discussion: Variants G and H are provisional groupings that have been recognized only in the 22IT576 sample.

Both varieties include contracting stemmed specimens which have been tentatively subdivided on the basis of the presence (Variant G) or absence (Variant H) of cortex/platforms on basal margins. Variant G includes projectile point/knives that are of moderate to large size. Bases are excurvate (7) and straight (7) and stem margins are asymmetrical as a result of unilateral resharpening/reworking. Cross sections are biconvex (7) or plano-convex (7). Twelve specimens in Variant G were recovered from Block D, one each from Levels 1.1B and 1.2B, three from Level 1.3C, two each from Levels 2 and 4, and one each from Levels 5, 6, and 7. One specimen each was recovered from Block A, Level 1, and Block C, Level 4. All specimens in this category appear to have been manufactured from large flakes (cobble spalls) or thin cobbles.

Variant H is comprised of projectile point/knives that have contracting stems and straight bases. Lateral stem margins are crushed or abraded. Shoulders are tapered (2) or asymmetrical (2). Blade margins are asymmetrical (3) and excurvate (1). Three of these projectile point/knives have been resharpened/reworked. Cross sections are biconvex (3) and flattened (1). Distributions are: Block D, one each from Levels 3, 5, and Feature 70, and one from Block A, Level 1.

McIntire n = 15 (Figure 7.57e, f):

Material:

Heated Camden	4	Ft. Payne	8
Tallahatta Quartzite	1	Heated Tuscaloosa	2

Metric Data: Table 7.17

Discussion: This category includes moderate to large specimens that exhibit expanding stems and straight (11) to excurvate (4) bases. Stem margins on the majority of specimens are only

slightly crushed or abraded. Shoulders are squared and barbed (3), squared (4), inversely tapered (2), tapered (2), or asymmetrical (5). Hafting elements are formed by corner removal which was initiated by broad corner notches. Blade margins are asymmetrical with the exception of three specimens, two of which are straight and one excurvate.

Resharpening/reworking flake series are most extensive along one blade margin. Cross sections are biconvex (9), flattened (5), and plano-convex (1). Distributions are: Block A, four in Level 1, one in Level 6; one each in Block B, Level 1 and Block C, Level 2; Block D, one each from Levels 1.1B and 1.3C, two from Level 2, one each from Levels 3, 5, 8, and 10. The macromorphological variation apparent in this category will necessitate closer scrutiny during future analysis. The distribution of the majority of specimens in the upper levels of the site suggests a relatively late date for the forms included in this category.

Morrow Mountain n = 17 (Figure 7.56a-f):

Material:

Heated Camden	12	Unheated Camden	1
Ft. Payne	4		

Metric Data: Table 7.17

Discussion: As described here, this category includes specimens that resemble both Coe's (1964:37, 43) Morrow Mountain I and II varieties and examples recovered from the Eva site (Lewis and Lewis 1961:37). It should be noted, however, that considerable diversity (Brookes 1979:[illegible]; Cambron and Hulse 1975:89; DeJarnette et al. 1962:63) exists [illegible] previous descriptions of this projectile point/knife form.

Specimens in this category are medium to small in size, with horizontal to tapering shoulders, short, contracting stems, and corner notches that produce a corner-removed outline. Bases are slightly excurvate to strongly excurvate (14), straight (1), or pointed (1), and are slightly abraded (10) or ground (4). Blade edges are straight (7), asymmetrical (5), or excurvate (1). Cross sections are biconvex (14) or plano-convex (2). Five specimens were recovered from Block D, three in Level 9 and two in Level 10, which overlap with Eva, Variant B examples in Block D. However, two Morrow Mountain projectile point/knives also were recovered from Level 7 in Block D and the integrity of either context cannot be fully assessed at present. One specimen was recovered from Level 8 in Block A, one in Level 4, one in Level 7 of Block B, and one in Level 6 of Block C. There was one specimen each in Levels 1.2B, 2, and 4 in Block D. Three specimens

were recovered from features, one each from Features 27 and 38 in Block D, and one from Feature 49 in Block A.

Mud Creek n = 1 (Figure 7.57c):

Material:

Heated Camden	1

Metric Data: Table 7.17

Discussion: The single example of the Mud Creek type has a slightly expanding stem that is offset from the midline axis. The base is excurvate and thinned and lateral hafting margins are abraded. Shoulders are asymmetrical and tapered. Blade margins are excurvate (Cambron and Hulse 1975) and converge at the distal end to form an elongated point. This specimen has been resharpened/reworked and appears to have been used as a perforator. The cross section is biconvex. This projectile point knive was recovered from Level 1.3C in Block D.

Residual Stemmed n = 75 (not illustrated):

Comments: This is a miscellaneous category that includes projectile point/knives that do not readily conform to one of the described types of variants. Data for the complete category are presented in Table 7.17 (measurement) and Appendices I and II (distribution). Several variants have been established here to group specimens by general morphological and technological attributes.

Residual Stemmed, Variety A n = 31 (not illustrated):

Material:

Fossiliferous Bangor	2	Heated Camden	21
Ft. Payne	6	Pickwick	1
Tallahatta Quartzite	1		

Metric Data:

Weight	11 g, n=3	Basal Width	15 mm, n=23
Length	47 mm, n=4	Shoulder Width	27 mm, n=17
Width	27 mm, n=13	Juncture Width	17 mm, n=28
Thickness	9 mm, n=11	Haft Element Length	12 mm, n=23

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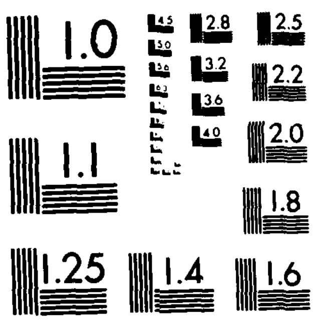

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Discussion: Variant A includes small-to-medium sized projectile point/knives characterized by straight to slightly expanding stems formed by corner removal. The bases are predominantly thinned and straight; however, several specimens with excurvate or slightly incurvate bases occur. Shoulders are tapered, straight, inversely tapered or asymmetrical. Serration is present on only one specimen. Cross sections range from plano-convex to biconvex. Rhomboidal cross sections are not represented. The majority of the Variant A specimens resemble Flint Creek, Little Bear Creek and Benton varieties. Eight were found in Block A: four from Level 1, two from Level 4, and one each from Levels 8 and 9. Two were found in Block B, one from Level 1 and the other from Level 6. Two were found in Block C, one from Level 2 and the other from Feature 84. Eighteen were found in Block D: one from Level 1.1A; four from Level 1.2B; one from Level 1.2C; two from Levels 1.3C, 3, 4, and 5; one each from Levels 2 and 8; two from Level 9; and one from Feature 24.

Residual Stemmed, Variety B n = 14 (not illustrated):

Material:

Agate	1	Heated Camden	7
Ft. Payne	3	Fossiliferous Ft. Payne	1
Oolite	1	Unheated Camden	1

Metric Data:

Weight	14 g, n=3	Basal Width	17 mm, n=1
Length	52 mm, n=6	Shoulder Width	30 mm, n=5
Width	31 mm, n=4	Juncture Width	20 mm, n=11
Thickness	11 mm, n=8	Haft Element Length	12 mm, n=8

Discussion: Variant B (n=14) contains generally medium-sized projectile point/knives characterized by slightly contracting, straight or slightly expanding stems formed by corner removal. Bases are straight, asymmetrical or excurvate. One-half of the specimens have thinned bases and the remaining examples retain cortex platforms exhibiting a proximal flake blank orientation. Shoulders are asymmetrical. Asymmetricl blade margins predominate, although on some specimens they are slightly excurvate. Cross sections range from plano-convex to biconvex with the latter more common. Variant B specimens resemble Vaughn points and Flint Creek-Little Bear Creek variants. Only two of the specimens were not found in Block D. One of these was found in Block B, Level 4, and the other was Block C, Level 7. In Block D, one each was recovered from Level 1.2B and 1.2C, two each from Levels 1.1A, 1.1B, and 1.3C, and one each from Levels 4 and 7.

Residual Stemmed, Variety C n - 6 (not illustrated):

Material:

Heated Camden	2	Unheated Camden	1
Ft. Payne	1	Tallahatta Quartzite	2

Metric Data:

Weight	8 g, n=1	Basal Width	13 mm, n=3
Length	49 mm, n=1	Shoulder Width	25 mm, n=4
Width	25 mm, n=4	Juncture Width	19 mm, n=5
Thickness	9 mm, n=2	Haft Element Length	10 mm, n=2

Discussion: Variant C includes small-to-medium sized projectile point/knives characterized by contracting stems produced by corner modification. Bases are thinned and straight to excurvate. Shoulders are tapered. Blades are excurvate or asymmetrical. Cross sections are biconvex. One specimen was recovered from Block B, Level 1, and the other five were recovered from Block D, one each in Levels 3, 7 and 10, and two from Level 4.

Residual Stemmed, Variety D n = 6 (not illustrated):

Material:

Heated Camden	6

Metric Data:

Weight	11 g, n=1	Basal Width	14 mm, n=1
Length	55 mm, n=2	Shouler Width	26 mm, n=3
Width	26 mm, n=4	Juncture Width	17 mm, n=4
Thickness	9 mm, n=4		

Discussion: Variant D contains specimens that have a broken basal segment. These projectile point/knives, however, retain portions of the stem and the shoulder. The blade elements are intact. The specimens were recovered from Blocks B, C, and D. In Block D one each was recovered from Levels 2 and 8 and Feature 22. In Block C one was recovered from Level 2, and in Block B one each from Levels 1 and 4.

Residual Stemmed, Variety E n = 2 (not illustrated):

Material:

Heated Camden	2

Metric Data:

Thickness	10 mm, n=2	Juncture Width	17 mm, n=1
Basal Width	12 mm, n=1	Haft Element Length	13 mm, n=1

Discussion: Variant E is characterized by small to medium hafted bifaces exhibiting contracting stems, excurvate bases and tapering shoulders. Blade margins are asymmetrical. These hafted bifaces are set apart because of extensive reworking and crushing of the blade and haft margins. Both were recovered from Block D, one each in Levels 2 and 3.

Residual Stemmed, Variety F *n* = 7 (not illustrated):

Material:

Heated Camden	4	Ft. Payne	3

Metric Data:

Weight	12 g, *n*=3	Basal Width	18 mm, *n*=6
Length	50 mm, *n*=4	Juncture Width	15 mm, *n*=1
Thickness	9 mm, *n*=6	Haft Element Length	11 mm, *n*=1

Discussion: Variant F contains a series of projectile point/knives that have been reworked. The reworking extends along the blade and haft element. This indicates that the retouching post-dates hafting and that the secondary use, based on the sinuous, bi-beveled edge, were probably a nonhafted implement. Some specimens were recovered from Block C, one each from Levels 1, 5, and 8. In Block D one specimen each was recovered from Levels 1.1A and 3, and two were recovered from Level 5.

Residual Stemmed, Variety G *n* = 3 (not illustrated):

Material:

Heated Camden	3

Metric Data:

Length	55 mm, *n*=1
Thickness	14 mm, *n*=3

Discussion: Variant G includes bifacial specimens with incipient haft elements. The haft elements are formed by corner removal (2) and corner notching (1). The stems are contracting (2) and expanding (1). The expanding stem example exhibits an inversely tapered shoulder whereas the corner removed bifaces have tapered shoulders. Blade margins are asymmetrical. Cross sections are plano-convex to biconvex. These specimens are considered incipient hafted bifaces that were discarded during the course of the manufacture of Flint Creek/ Little Bear Creek projectile point/knives. This variant was recovered from Level 1 in Block A and Levels 1.2B and 2 in Block D.

Residual Stemmed, Variety H n = 4 (not illustrated):

Material:

Heated Camden	3	Ft. Payne	1

Metric Data:

Weight	15 g, n=2	Basal Width	9 mm, n=2
Length	62 mm, n=2	Shoulder Width	30 mm, n=2
Width	29 mm, n=3	Juncture Width	17 mm, n=2
Thickness	10 mm, n=4	Haft Element Length	10 mm, n=1

Discussion: Variant H hafted bifaces are characterized by contracting haft elements that terminate asymmetrically at the shoulders. The blade margins generally are excurvate. Blade margins have been reworked and exhibit sinuous edges that usually are crushed or contain a series of step fractures. Cross sections are plano-convex (3) or flattened. Variant E specimens could be Gary-like knives. Three of these were recovered from Block D, one each from Levels 2, 3, and 5. The other was recovered from Level 1, Block A.

Residual Stemmed, other n = 2 (not illustrated):

Material:

Heated Camden	1	Ft. Payne	1

Metric Data:

Length	26 mm, n=1	Juncture Width	19 mm, n=2
Thickness	7 mm, n=1	Haft Element Length	10 mm, n=2
Basal Width	14 mm, n=2		

Discussion: These are specimens that did not fit any of the above varieties. One specimen was recovered from Block D, Level 2, and the other from Block D, Level 1.2C.

Residual Triangular n = 4 (Figure 7.55n, o):

Material:

Heated Camden	4

Metric Data: Table 7.17

Discussion: Two large and two small specimens are included in this category. All four specimens could have been used as projectile point/knives in their present form or may be preforms with poorly defined hafting elements. Tertiary flaking and/or minor

retouch series are present on the lateral margins of these specimens.

The two relativly small examples have thinned, excurvate bases, and excurvate or asymmetrical lateral margins. Tips are acute on both examples. Cross sections are biconvex. There is no evidence of crushing or abrasion along the bases and edges of either specimen. The small members of this category were recovered from Block D, one each from Levels 9 and 10.

The two larger specimens have thinned bases, one of which is excurvate and the other incurvate. Both specimens have been thinned (broad,random flaking scars), have retouch and/or small tertiary flake removals along lateral margins, and exhibit crushing (abrasion on their bases). The tip on the one complete example is acute. Cross sections are biconvex and plano-convex. These specimens also were recovered from Levels 9 and 10 in Block D.

<u>Savannah</u> <u>River</u> <u>n</u> = 3 (Figure 7.55k):

Material:

Ft. Payne	1	Tallahatta Quartzite	2

Metric Data: Table 7.17

Discussion: The three specimens in this category are large, have slightly expanding stems (1), or straight (2), incurvate bases. The stems are formed by broad flake removals oriented parallel to the base. Bases are thinned and stem margins are crushed (2) or ground (1). The shoulders are tapered. Blade margins are excurvate (1), asymmetrical (1),or straight (1) and one specimen is serrated. Cross sections are biconvex. Two of these specimens were recovered from Levels 1, Block C and one from Level 5, Block D. These specimens resemble a small variety of Savannah River projectile point/knives recovered at the Gaston site (Coe 1964:110).

<u>Swan</u> <u>Lake</u> <u>n</u> = 2 (Figure 7.55p):

Material:
Heated Camden 2

Metric Data: Table 7.17

Discussion: The two examples classified as Swan Lake projectile point/knives ae small in overall size, with expanding stems formed by broad side notches. Both projectile point/knives have

relatively shallow side notches and are widest at their bases. The bases are not well-thinned and margins exhibit only minor crushing. Shoulders are tapered. Blade margins are excurvate and have not been extensively resharpened/reworked. Cross sections are biconvex. Both specimens were recovered from Block D in Levels 1.2C and 1.3C.

<u>Sykes-White</u> <u>Springs</u> <u>n</u> = 30 (Figure 7.56g-i, l, m):

Material:

Fossiliferous Bangor	1	Heated Camden	18
Unheated Camden	3	Ft. Payne	4
Fossiliferous Ft. Payne	1	Unheated Tuscaloosa	1
Tallahatta Quartzite	2		

Metric Data: Table 7.17

Discussion: Six of the 30 specimens in this category were recovered in Block D from Levels 9-11; this is interpreted as an appropriate stratigraphic context for these specimens. This sample has been used to describe this hafted biface category from 22IT576.

Hafted bifaces in the Sykes-White Springs category are generally triangular in outline, with straight to slightly incurvate bases, tapered or squared shoulders, and relatively short stems. Bases are slightly abraded, tangs are rounded or somewhat pointed, stems are straight to slightly expanding, and blade edges are excurvate. The shoulders are the widest section of these examples, although on most specimens, stems are nearly as wide. Cross sections are biconvex.

Two additional specimens, one each from Blocks A, Level 10 and Block B, Level 8 occur in proper stratigraphic position and conform to the description porvided above. The remaining 23 specimens reveal some internal diversity, possibly as a result of reworking and longer life histories. In general, the latter examples resemble the sample described above in terms of gross morphology and are provisionally retained in this category. Additional distribution included: Block A, one each from Level 6, Features 49 and 71; Block B, one each from Levels 1, 3, and 8; Block C, one from Level 1; and Block D, two each from Levels 1.1B, 1.3C, and 6, one each from Levels 1.2B, 1.2C, 2, 3, 4, 5, and Feature 85, three from Level 7, four from Level 9, and one each in Levels 10 and 11.

Tombigbee Stemmed $\underline{n}$ = 1 (Figure 7.55d):

Material:
Heated Tuscaloosa 1

Metric Data: Table 7.17

Discssion: This fragmentary specimen has a contracting stem, an asymmetrical base, and tapering shoulders. Stem margins exhibit only minor crushing. The blade margins are asymmetrical. Resharpening/reworking flake series are most extensive on one blade margin. The cross section is biconvex. This specimen was recovered from Block B, Level 1.

Small Unfinished Triangular $\underline{n}$ = 11 (Figure 7.57a, b):

Material:

Heated Camden	9	Heated Tuscaloosa	2

Metric Data: Table 7.17

Discussion: The eleven specimens included in this provisional category are generally triangular in outline with thick or irregular cross sections and asymmetrical blade margins. Although they are classed as "unfinished", many of these specimens may have been used in their present form or have been reworked from larger projectile point/knives. Flake scars are random and all examples are small in size. Bases range from excurvate (asymmetrical) (4) to straight (2) to incurvate (4). Distributions are: Block A, one each from Levels 1 and 2; Block C, one from Level 1; Block D, two from Level 1.1A and one each from Levels 1.2C, 3, 4, 5, 7, and 8.

Vaughn $\underline{n}$ = 4 (Figure 7.55 1):

Material:

Heated Camden	2	Tallahatta Quartzite	2

Metric Data: Table 7.17

Discussion: The four projectile point/knives included in this category have geneally straight stems, straight (1), to slightly excurvate (3) bases, and rounded basal tangs. Stem margins are crushed. Shoulders are tapered. Blade margins are asymmetrical (3) and straight (1). All examples have resharpened/reworked blades. Cross sections are biconvex. All speccimens were recov-

ered from Block D, one each from Level 1.2B and Feature 70, and two from Level 4.

Cores $\underline{n}$ = 40 (Figure 7.59a-g):

Material: Table 7.18

Metric Data: Table 7.19

Discussion: Cores, theoretically the product or by-product of flake removal, were classed generally by the type or direction of flake removal, the degree to which the surface had been worked, or the utilization of specialized techniques. This scheme yielded a series of unifacial and bifacial cores that were subdivided into types based on attributes reflecting the number of sides worked, expressed in 90° quadrant increments, and when appropriate, whether they were adjacent or opposing.

Twelve specimens were typed as "Core Other." These specimens were not classifiable into the established categories.

A fourth group of cores were typed as either microblade or bipolar specimens. The distinctive features employed to sort these specimens include size, flake scar characteristics, or crushing of the distal margin.

A majority of the uniface, biface, and "other" cores exhibit moderate to heavy edge damage on one or more edge sections. This damage is most often manifested by clusters of step fractures and some crushing. Also, this edge wear most often is located on a steep angled, scraper-like edge; a few specimens, however, exhibit sinuous, chopper-like edges. As noted in Ahler's review in Appendix III, a number of these artifacts have been utilized.

Stratigraphically, the cores are concentrated in or above Level 9 in all blocks with the exception of one specimen in Level 15 of Block D. One core was present in each of Features 16, 90 and 118. This generally coincides with the Benton and post-Benton occupations. This also roughly correlates with the midden zone and the heaviest concentration of material remains in the site.

Preforms (I and II) $\underline{n}$ = 192 (Figures 7.59i-k, 7.60, 7.61):

Material: Table 7.20

Metric Data: Table 7.21

Discussion: This category contains early stage reduction material. The specimens range from rough ovates that retain cortex on both surfaces (Preform I) to forms that exhibit preliminary thinning and shaping (Preform II). The sample represents a continuum ranging from amorphous bifacial "chunks" through morphologically distinct forms. A majority of the specimens are proximal, medial, and distal fragments. Approximately 20% to 30% of the specimens exhibit edge damage. Further analysis, however, will be required to determine if this attrition is the result of manufacture or use.

Generally Preform I's exhibit attempts at cortex removal. Cobbles, split cobbles, and large flakes are utilized for the production of the blank or preform stages that are represented by materials classed as Preform I. The Preform I stage is generally characterized by minor thinning accomplished by the removal of a low number of comparatively large flakes. As noted above, the preform category contains a high percentage of fragmentary specimens. Among the Preform I specimens, about 10% of the artifacts represent morphologically distinct or whole specimens.

Artifacts classed as Preform II's generlly have been thinned and shaped more extensively than Preform I's and, consequently retain less cortex. Few complete specimens are represented in the Preform II sample. The proximal and distal fragments included in this group suggest that ovate and triangular forms dominated. The fragmentary Preform II forms are somewhat thicker but similar in outline and cross section to many of the proximal and distal fragments classed as Biface Blades. Generally, there is morphological and technological overlap between the Preform II and Biface Blade fragments. Preforms were most abundant in Blocks A, C, and D. They occurred at all levels; however, in Block D, 16 were present below Level 10, while there was only one in Block A. Those in Block C were between Levels 1 and 8. Only five preforms were present in Block B in Levels 2 through 4.

Biface Blades and Quarry Blades $\underline{n}$ = 238 (Figures 7.62, 7.63, and 7.64):

Material: Table 7.22

Metric Data: Table 7.23

Discussion: A wide range of biface blades were identified from 22IT576. This reflects the morphological diversity in this artifact group. Since morphology rather than technological stage was employed largely to categorize specimens, additional analysis will be required to establish the technological stage that each

of these bifaces represents in a reduction sequence(s) or implement trajectory(ies).

Biface blades were contained in all excavation blocks. They appeared to concentrate in the upper 50 cm and lower meter of the site. The low number of preforms between approximately 50 and 90 cm below surface correlates with the Benton component. This low number agrees well with the change in technology hypothesized for this phase elsewhere in this report. One type, Quarry Blades, is technologically distinct. Five specimens were recovered from the site, all manufactured from Ft. Payne chert. Four of the artifacts represent Feature 10, a cache recovered from Block B, Level 5. The remaining Quarry Blade was found in Block A, Level 5. These bifaces are leaf-shaped and range from triangular to ovate in outline. Cortex platforms are retained on base or butt of two specimens. The remaining artifacts have been thinned across the base. Two of the blades retained small remnants of cortex on their tips. The lateral blade margins are generally excurvate. Blade and thinned basal margins have been heavily abraded. All specimens exhibit broad, collateral flake scars. These Quarry Blades form a segment of the Benton assemblage and probably represent blanks (Bradley 1975:5).

Scrapers $\underline{n}$ = 198 (Figures 7.65, 7.66a-j, m, p-s, u):

Material: Table 7.24

Metric Data: Table 7.25

Discussion: The Scraper category contains a variety of unifacial and bifacial implements exhibiting a steep, beveled, scraper-like edge. Scrapers are manufactured on or are the result of the utilization of several different reduction stage products, e.g., cores, flakes, and bifaces. Types are based on these reduction stage attributes in combination with morphology, edge orientation, edge configuration, "multi-functional," or reworking characteristics.

Few stratigraphic distribution patterns are discernable for this category. Among the unifacial end scrapers, a small cluster of nine "thumbnail" scrapers were recovered from Levels 10 (2) and 11 (7) (Figure 7.65a-g) in Block D. These levels principally contain Middle Archaic hafted bifaces. Two "thumbnail" scrapers were also recovered from Levels 9 and 12 in Block D (Figure 7.65h-i). This zone is correlated with the Middle Archaic component in Block D. No other distribution patterns were observed for the flake, cobble, bifacial, and recycled hafted scrapers or spokeshaves within and above the Middle Archaic zone.

Scrapers associated with the Early Archaic component were diverse and reflect a variety of uses. The categories included uniface and biface end, side, cobble, and recycled types.

As a whole the Scraper category contains a majority of flake scrapers that have been retouched or utilized as end, side, or multi-edge scrapers. These tools are comparatively small and fragile. Edge attrition and modification of the forms suggest employment in tasks related to hide working, butchering, or processing vegetal or herbaceous materials. Scrapers that may have been utilized for working dense materials like bone and wood are in the minority. Such tools hypothetically should exhibit large, strong edges that have been heavily step-fractured, crushed, and rounded. Actually a number of artifacts in the Core, Preform, and Biface Blades categories were used for these purposes. A functional analysis of these lithic categories will probably reveal a series of heavy duty scraping implements.

The majority (n=125) of artifacts included in the Scraper category are unifacially worked flakes or thermal spalls that are typed on the basis of the worked edge location and flake morphology. To briefly summarize these types by edge orientation, they include 40 end, 54 side, and 31 end-side scrapers. Other unifacial scrapers include 15 notched flakes/spokeshaves, three unifacial cobbles, and one hafted end scraper.

The remaining scrapers were made from other tools (29 recycled), were bifacially worked (8), and were miscellaneous forms and fragments (17).

The distribution of scrapers was unusual. While some were contained in all blocks, Block D had by far the largest number (A=6, B=16, C=10, D=128). Only in Blocks B and D were scrapers present below Level 9. The vertical distribution of scrapers was characterized by high frequencies in the upper 50 cm, low frequency in the middle (Benton/Sykes-White Springs), and high frequencies again in the Early Archaic deposits.

<u>Drills, Perforators, Gravers, Reamers, Etc.</u> <u>n</u> = 348
(Figures 7.67, 7.68, 7.69, and 7.70):

Material: Table 7.26

Metric Data: Table 7.27

Discussion: This category includes several classes and types of what are inferred to be drilling, piercing, and incising implements. The greatest morphological variation occurs between

drill types and some overlap between classes (i.e., Drills, Gravers, Perforators, and Reamers) is apparent. Use-wear in the form of crushing, polishing, and rounding of the bit and shank margins on many of the drills and some of the perforators suggests that both rotary and piercing motions were employed. Among the drill types, particularly the shaft variety (Figure 7.67a-f), the bits of several were bifacially worked to a slightly excurvate scraper or chisel-like edge (Figure 7.67a-c). These bits are often crushed, rounded, and the bit faces polished. Chisel-like bits were present on five of six complete specimens; bit width approximates shank width. Within the expanding base variety (Figure 7.67g-s), the scraper/chisel-like bit is narrower than that of the shaft drill. Three of twelve whole expanding base drills exhibit this form of worked bit. None of the nine complete stemmed drills (Figure 7.68a-n) has the bit modified to the scraper/chisel morphology. Different bit morphology within these categories suggests the use of these tools as chiseling in addition to piercing tools.

Use-wear of the perforators (Figure 7.69a-i), recycled perforators (Figure 7.68q-u), reamers (Figure 7.69j-l), recycled reamers (Figure 7.68o, p), and gravers (Figure 7.69p-u) is restricted largely to a short, acute spur bit. The general absence of crushing and polishing of the lateral margins of these spur bits suggests they likely were employed as awls or, in some cases, incising implements. As noted earlier there is some overlap between graver, perforator, and reamer types. These implements were manufactured on flakes and occasionally bifaces. The recognition of the recycled perforators and recycled reamers as a group is less difficult since these apparently were manufactured on reworked hafted bifaces. Morphological and technological attributes distinguishing recycled perforators and reamers, however, are not closely drawn.

A series of microlith perforators (Figure 7.70l-s) and other microliths (Figure 7.70a-k) was recovered from the site. Microlith perforators were manufactured on secondary, or perhaps tertiary, thinning flakes and exhibit spurs formed by steep, unifacial retouching or possibly abrasion of two converging edges. Wear or attrition is normally present on the tip of the spur and is characterized by minute step-scarring and crushing. Polish also is present on many of the specimens.

Microlith tools include modified microblades, small, blade-like flakes, and small thinning flakes. With three exceptions, all artifacts in this group were unifacially worked into a series of end, side or multi-edge scrapers. Two implements in the microlith type do not exhibit scraper-like attributes. These are thinning flakes that have been bifacially retouched to produce a graver/perforator/reamer type working edge.

The remaining type included in this group is denticulates (Figure 7.69n-o). This type consists of flakes with a serrated edge. Only three specimens in this group were recovered.

A few correlations have been observed between artifacts included in this category and stratigraphic distribution. Shaft drills were distributed in Levels 1 through 7 in Block D (19); a small cluster (4) was recovered from Level 2. These artifacts continued in Levels 1 to 4 in the other blocks. Generally, these artifacts appear to date to the Late Archaic period and subsequent occupations.

Expanding base drills were recovered from Levels 1 through 10 in Block D. This distribution generally is reflected in the other blocks. Block B, however, produced a specimen from Level 14 which correlates with the Early Archaic component. As a group, the expanding base drills occur most frequently in the upper levels of the site, Levels 1.1 to 6,which contained Late Archaic through Mississippian period components. Stemmed drills were confined principally to Levels 1.1 to 6 although specimens were recovered in Level 9 in both Blocks A and D. The distribution of gravers, perforators and reamers, including recycled forms existed throughout the occupation of the site. They were found in the largest numbers in the midden zone which contained Late Archaic period and subsequent occupations.

Denticulates were scattered within the midden above 80.2 m.

Microperforators were more tightly clustered stratigraphically than most member types of this tool group. These implements were concentrated in Block D, Levels 5 to 8. These appeared to be associated with the initial Late Archaic period Benton component. Only two microperforators were recovered outside Block D. One was recovered in association with Feature 49, prepared, and one was in Level 5 of Block B. Both were also associated with the Benton component.

Microliths were more broadly distributed horizontally and vertically than microperforators. Microliths were recovered in Blocks B, C, and D; the latter block contained the largest sample (14). Microblades/blade-like flakes occurred most frequently (8) in Levels 9 and 10 in Block D which correlate with the Middle Archaic occupation. Other artifacts of this type recovered from Block D include one each from Levels 1.3, 2, 5, 11, and Feature 16. Two specimens occurred in Level 8. Microliths were recovered from Levels 3, 4, and 9 in Block B; Levels 2, 10, and Feature 4 of Block C produced members of this class.

Other Uniface and Biface Tools n = 2889 (Figures 7.71,7.72.7.73 and 7.74):

Material: Table 7.28

Metric Data: Table 7.29

Discussion: This category contains diverse artifact types/varieties. The types/varieties of this category represent material classes containing considerable morphological and technological variability to idiosyncratic items. The largest constituent of this category is Unidentified (unifacial and bifacial) Chipped Stone Fragments (n=2,772). The remaining 117 artifacts may be classed into 10 groups: adzes, axes, chisels, choppers, digging implements, knives, splintered wedges (piece esquille), wedges, multi-element tools, and other artifacts.

Nine adzes were recovered, including one unifacial and eight bifacial types. The unifacial specimen was manufactured on a thick, primary decortication flake and exhibits a beveled, irregular edge which is crushed and fractured (Figure 7.73g). The bifacial adzes vary in shape, edge morphology, and cross section from rectangular to ovate and plano-convex to biconvex (Figure 7.73h-j). Generally, edge margins are fractured, scarred, crushed, or rounded. The biconvex forms compare with many of the artifacts included in the preform category. These same specimens also resemble chipped stone celts.

Two adzes were recovered in the upper levels of Blocks A and C (Levels 1 and 3). Six specimens were recovered from Block D, Levels 5, 10, 13, and 15. The Block D specimens appear to be associated with the Late Archaic (Levels 5 and 10) and Early Archaic (Levels 13 and 15) components.

Two chipped stone axes were identified. One of these artifacts is a spall fragment and the second is a complete specimen that has been extensively resharpened (Figure 7.70t). Both artifacts were formed by bifacial removal of large percussion flakes and are flat to biconvex. Hafting grooves had been chipped in the lateral margins (top and bottom) and these exhibit some crushing and rounding. Both specimens were recovered from Block A, Level 1 and cannot be associated with a component.

A series of 25 unifacial and bifacial choppers was identified. These artifacts characteristically were manufactured from cobbles and spalls (Figure 7.71b-j). Edges normally were established by minimal decortication and formed the smallest amount of secondary thinning. Edge cross sections vary from sinuous, biconvex or bibeveled to straight or curved and plano-convex or beveled. Edge attrition in the form of crushing, rounding or step fracture usually is present on both the dorsal and ventral edge margins of

artifacts which have a bi-beveled, knife-like edge. Crushing and clusters of step fractures on either the dorsal or ventral edge surface characterize the specimens exhibiting a beveled scraper-like edge.

Nine of the implements classed as biface choppers and all four uniface choppers exhibit steep beveled edges and attrition on either the dorsal or ventral edge margin. These were recovered principally from Block D. Six biface and three uniface specimens were found scattered between Levels 1 and 11 but were clustered in Levels 2 and 4 (4) and 6 to 8 (4). Block A yielded artifacts of this type from Levels 3, 5, and 10, and one was recovered from Feature 4 in Block C.

The remaining 12 biface choppers exhibit sinuous, knife-like edges. Nine of these implements show wear on both edge faces. Two cobble specimens, however, have few flakes struck from them and the resulting edges appear fresh; these may be tested cobbles rather than tools. These cobble choppers were excavated from Blocks B, C, and D. Block D yielded the largest sample (7). These were clustered in Levels 1 (2) and 9 to 10 (4); the remaining specimen was found in Level 4. Block B yielded artifacts of this variety from Levels 1 and 3, and Block C, Level 4, contained one implement of this type.

Generally, the beveled-edge choppers tend to be associated with the Late Archaic occupation and the sinuous-edged choppers form a component of the Middle Archaic lithic assemblage. The large, strong edge of both implement types and the heavy edge attrition exhibited by these remains suggest primary working of dense materials like bone and wood.

Thirteen artifacts were classed as digging implements (Figure 7.71a). Eleven of the specimens were maufactured from ferruginous sandstone and two artifacts were made from conglomerate. The ferruginous sandstone specimens are generally tabular to plano-convex. One conglomerate artifact is plano-comvex and the other is biconvex. These conglomerate artifacts, one a large spall and the other a biface, exhibit little edge attrition.

The sandstone artifacts were bifacially modified to produce sinuous knife-like edges or beveled scraper-like edges. Edge attrition is registered principally in the form of grinding. Step fractures are present on specimens exhibiting beveled edges (4), although not in large numbers.

The distribution of digging implements is largely confined to Levels 5 and above, the zone of the site contaning terminal Archaic and ceramic horizon components. A cluster of five specimens was found in Levels 1.1 and 1.3, Block D. One artifact was recovered in Level 2, Block A. Block C produced one of these im-

plements from Level 9 and one was recovered from the backfill of a pothole.

A series of 27 artifacts classified as uniface, biface, or cobble knives was recovered (Figures 7.72a-h, 7.73e, f, and 7.74a-k). Artifacts included in this group, particularly the biface flake knives, exhibit considerable diversity in outline, cross section, and edge treatment. Specimens range from completely worked bifaces to unifacially retouched/utilized flakes. Among the bifacial flake knives, 10 of the specimens exhibit edge wear only on the dorsal or ventral edge surface (Figure 7.72e-h). The remaining bifacial flake knives exhibit one or more sinuous, beveled edges which show edge attrition on both the dorsal and ventral margins (Figure 7.72a-d).

Artifacts classified as uniface flake knives (n=12) (Figure 7.72a-j) exhibit major modification on only one surface of an edge(s). Edge modification is attributable to retouching, usually quite delicate, or utilization producing scalar scarring or step fracturing. Generally, the worked or utilized edge is located on a lateral margin of the flake that exhibits a slight, natural bevel.

Two biface cobble knives were recovered from the site (Figure 7.73e-f). One of these implements was manufactured on a thinned, primary decortication flake and the other on a split cobble. One artifact exhibits a sinuous, crushed, and rounded edge. The second specimen exhibits a sinuous, delicate edge which shows little wear other than light polish on the high points and minute clusters of scalar scars, principally on the dorsal surface.

The distribution of the bifacial and cobble knives largely segregates into the upper and lower sections of the site. Fourteen of these implements were recovered from between Levels 1 and 6 in Blocks A to D. None were recovered from Levels 7 to 9 throughout the site. Biface flake implements reappear in Levels 10 to 12 and 15 in Block D and from Level 13, Block B. Unifacial knives were primarily confined to the lower occupation zone of the site. One uniface was located in Level 4, Block D. All the remaining uniface knives in Block D were affiliated with the earliest Early Archaic component (Figure 7.74a-h).

Three artifacts were classed as splintered wedges (piece esquille) (Figure 7.741-m). Specimens exhibit bipolar crushing or percussion on opposite margins and at least one scraper-like edge (cf. Chapman 1977:82). These artifacts were recovered from the Early Archaic component in Block D. A recycled, burinated biface was also splintered. This specimen was recovered from Feaure 103 which was defined in Level 12, Block D.

Twelve artifacts classed as wedges were recovered from the site (Figure 7.73a-d). These implements include unifacially worked/modified flakes and spalls, bifacial flakes, and bifaces. All specimens exhibit edge damage in the form of crushing, rounding, or step fracturing on an edge margin opposite a platform or battered edge. Ten of the twelve specimens were recovered in the midden zone containing Terminal Archaic and later occupations or historic intrusions. Two wedges were recovered from Levels 9 and 11, Block D, which correlated with a Middle Archaic component.

Multi-purpose tools include one chisel-adze, four chopper-hammerstones, and a recycled, burinated biface. The chisel-adze is a bifacially worked cobble that exhibits a narrow, excurvate, bifacially retouched bit. Some step fractures are present on the dorsal surface of the bit and along sections of the lateral margin near the bit. This artifact was recovered from Block D, Level 11.

The chopper-hammerstones are large cobbles or bifaces that exhibit a platform or battered area opposite a damaged edge. The size of the smaller of these artifacts overlaps with the wedges. Chopper-hammerstones were recovered from Level 2 in Block C, Level 1 in D, Level 3 in Block B, and Feature 21. The recycled, burinated, biface mentioned above exhibits bipolar damage.

Two artifacts are included in the "other" category. Both are spalls or large flakes. One is a chert decortication flake that has minimal bifacial retouch around sections of the edge margin to form a sinuous knife-edge. The second artifact is manufactured from ferruginous sandstone. The dorsal surface was thinned and a few flakes have been struck from the central face. This artifact is plano-convex. The lateral and dorsal edges exhibit a beveled, scraper-like morphology. The edges show light wear in the form of some step fracturing and slight rounding.

The Unidentified Chipped Stone Fragments category contains 2,772 specimens and is by far the largest in this group. As stated in Ahler's and Collins' review of the lithic analytical system used in Phase I of this project, this is a diverse "catch-all" category. Within the time and analytical constraints of Phase I, the identifiable tool fragments were classed, but more questionable specimens were not. A more intensive and detailed classification system should, of course, include these specimens.

The smaller tools such as wedges, knives, burins, adzes and chisels had a weak bimodal distribution as the previously mentioned tool types. The same pattern was followed in the larger chipped stone tools. However, in both size groups very few were present in Blocks B and C.

Utilized Flakes and Chert Chunks $\underline{n}$ = 5234 (not illustrated):

Discussion: This category includes flakes and chert chunks identified by the presence of edge damage and sorted on the basis of size or morphological/technological attributes.

The distribution of the utilized 1-inch, 0.5-inch, 0.25-inch flakes and chert chunks recovered from Blocks A through D is provided in Appendix I. Table 7.30 summarizes this artifact group.

A comparison of the utilized flake totals and those of the nonutilized debitage reveals that the proportion of use or edge damage decreases with size. Table 7.31 illustrates this by presenting the utilized flake size grades as percentages of the comparable type of nonutilized debitage.

Given the large number of specimens in this category, additional study is warranted to determine the nature, extent, and manner of use of these tools. One of the principle questions that should be investigated is the nature of the utilization on the flakes edges. These are usually expedient, on-the-spot tools, and with such a large number from the excavated sample, they evidently played a significant role in the activities practiced at the Poplar site.

Nonutilized Debitage $\underline{n}$ = 102,119 (not illustrated):

Discussion: The distribution of Nonutilized Debitage is presented in Appendix I. Tables 7.32-7.35 summarize the size and raw material distribution for each of the excavation blocks. When the totals of size and raw material are ranked (Table 7.36), it is seen that the 1.0-inch flake category is dominated by ferruginous sandstone, heated Camden chert and unheated Camden chert. The most popular materials of 0.5-inch flakes include heated Camden chert, ferruginous sandstone, unheated Camden chert, and Ft. Payne chert. The most dominant materials present among the 0.25-inch debitage include heated Camden, Ft. Payne, and unheated Camden cherts.

The reduction in frequency of ferruginous sandstone and conglomerate from 1.0-inch through 0.25-inch flake categories and their concommitant lower ranking probably is the result of their flaking properties. These properties permitted the manufacture of larger implements but were less conducive to making or maintaining smaller tools.

The increasing frequency of Ft. Payne chert from the 1.0-inch category through the 0.25-inch debitage suggests that this

material was conserved and that tools requiring more delicate working were manufactured or rejuvenated from it. This inference seems likely because Ft. Payne chert is a non-local material and probably was transported to the site in the form of quarry blanks, such as those discussed previously.

Nonutilized debitage was recovered from most levels excavated throughout the site. The stratigraphic distribution of this material was examined by charting the percentages of each recovered material type of the most frequent size grade of flakes, the 0.25-inch category (Tables 7.37-7.39).

Several trends are recognizable within Block D (Table 7.40). The size, depth, and location of this block probably increased the reliability of its debitage sample. The frequencies of heated and unheated Camden and Tuscaloosa chert change distinctly between Levels 9 and 8. Level 9 contains a smaller proportion of heated chert and a larger sample of unheated chert than does Level 8. Level 8 exhibits an inverse relationship to Level 9 and proportionately contains greater quantities of heated chert and lesser amounts of unheated chert. This relationship is significant because these levels straddle the boundary between the darkest midden zone which contains much charcoal and the underlying, lighter sediments, and correlates with contact between the Benton/Sykes-White Springs and Eva components. The rise in the percentage of heated material within the darkest midden zone could suggest that much of the thermally altered debitage resulted from incidental rather than intentional firing. Accompanying the Level 8 heated-unheated chert inversion is a dramatic increase in the frequency of Ft. Payne chert. This chert type forms a greater proportion of the Level 8 sample (12.09%) than in the underlying Level 9 (4.69%), and reflects an increase from 81 specimens in Level 9 to 203 in Level 8. Again, this change correlates with the midden zone and submidden sediments, and the boundary between the Benton/Sykes-White Springs components.

Most other "exotic" cherts or cryptocrystallines (agate, Bangor varieties, chalcedony, Flint Ridge, fossiliferous Ft. Payne, Novaculite, oolite and others) were recovered from the midden zone, although a few specimens were found in Levels 9 to 11. This distribution of the "exotics" mirrors the increased utilization of Ft. Payne chert and probably reflects increased trade or travel by site inhabitants as well as more intense utilization of the locale. The identification of Flint Ridge chert, if accurate, points clearly to external contacts.

The comparatively low frequency and uniform distribution of Pickwick chert are puzzling. Unlike Ft. Payne chert, which shows a dramatic increase in popularity throughout most of the sequence, Pickwick material show little fluctuation in use. This

suggests that the Pickwick Chert is being obtained in small quantities from local gravels.

With respect to non-cryptocrystalline materials or cherts, most material types were confined to Level 11 and above. These materials included greenstone, hematite, limonite, petrified wood, quartz, quartzite, Tallahatta quartzite, sandstone, and siltstone. The introduction of these materials coincides with inhabitation of the locale by Middle Archaic period peoples and subsequent occupations.

Conglomerate and ferruginous sandstone debitage exhibit peaks in their distributions in Levels 9 to 11. This zone correlates with the Middle Archaic occupation at the site that is marked principally by the Eva-Morrow Mountain component.

The 0.25-inch debitage from the Early Archaic assemblages, Levels 13-17, consists of heated Camden, unheated Camden, Ft. Payne, heated Tuscaloosa and unheated Tuscaloosa cherts, conglomerate, and ferruginous sandstone. The only unusual pattern is that of unheated Tuscaloosa chert which exhibits its highest frequency with these level samples. Also, unidentified debitage is most common in those levels containing Early Archaic components. The debitage sample from the general excavations, however, is comparatively less than that from any other level because of featured debitage concentrations (see Features 113, 116, 118, 119, and 120).

The observations noted from the 0.25-inch debitage are largely reinforced by the distribution of the 0.5-inch flakes recovered from Block D (Table 7.41). The exceptions are that the heated-unheated chert inversion boundary does not show clearly and the increase in Ft. Payne occurs between Levels 7 and 8 rather than between Levels 8 and 9.

In summary, an increased frequency of heated chert and an increased utilization of Ft. Payne and other "exotic" cherts characterize the occupations from the Benton/Sykes-White Springs components at the site which are located in the dark, organically stained midden zones.

Levels 9 to 11 see the introduction of a series of non-chert materials and the highest frequency of use of conglomerate and ferruginous sandstone. This zone correlates with the Middle Archaic period represented by the Eva-Morrow Mountain component. The Early Archaic components are registered by the comparatively high use of unheated Tuscaloosa chert, a local gravel. Otherwise, debitage frequencies of types are similar to those observed throughout the sequence.

Finally, a reduction in overall quantity of debitage or other material in Levels 12 and 13 appears to reflect a geological nonconformity and/or a hiatus in occupation. This zone between mid-Level 11 and mid-Level 13 was nearly devoid of material.

The distribution of 0.25-inch debitage suggests a series of stratigraphic groups. Levels 1.2 and 1.3 (10-30 cm) contain about the same amount of material. Levels 2 and 3 (30-50 cm) are roughly equivalent and are isolated by a distinct increase and decrease in material above and below respectively. Levels 4 and 5 (50-70 cm) contain roughly similar amounts and are isolated by significant changes in the frequency of material in the overlying and underlying levels. Levels 6 through 10 (70-120 cm) reflect similar amounts of debitage. Again, distinct changes in overlying and underlying debitage totals isolate this zone. The last cluster occurred in Levels 14 and 15 (160-180 cm) and probably includes Levels 13 and 17 (140-190 cm).

An examination of the 0.5-inch debitage of Block D parallels the 0.25-inch clustering. The only differentiation is that Levels 6 through 8 (70-100 cm) and Levels 9 and 10 (100-120 cm) show clustering. These clusters appear to define separate components that do not emerge in the 0.25-inch debitage distribution.

<u>Ground Stone Tools</u> <u>n</u> = 1735 (Figures 7.75,7.76,7.77 and 7.78):

Material: Table 7.42

Metric Data: Table 7.43

Discussion: This category contains diverse ground and polished stone artifacts principally classed by traditional types. The constituents of this category represent types contaning considerable morphological and technological variability to idiosyncratic items. The most frequently represented type in this category is Unidentified Polished and Ground Stone Fragments (1386). The remaining 294 artifacts may be classed into groups representing tools, articles, and miscellaneous by-products, fragments, and other items. The tool group includes abraders, pitted anvilstones, edge ground cobbles, celts, hammerstones, mullers, mortars, pestles, projectile point/knives, and multi-element implements. The article group contains atlatl weights, beads/bead preforms, boatstones, discoidals, gorgets, and tubular pipes. The miscellaneous group includes drill cores, sandstone sherds, ground hematite and limonite, and "other" ground stone specimens.

Abraders (16) (Figure 7.75a-d) exhibit one or more narrow grooves, linear depressions, or striations. These artifacts generally were made from irregular tabular sandstone or ferruginous

sandstone fragments. Thirteen of the abraders were scattered primarly throughout the dark midden zones and correlate with the Late Archaic through the Late Mississippian occupations. Three abraders, however, were recovered from Early Archaic component in Levels 16 and 17, Block D (Figure 7.75a), and Level 14, Block B.

Pitted anvilstones (33) (Figure 7.75e-g) are tabular cobbles, predominantly of ferruginous sandstone, that exhibit one or more small circular depressions (ca. 3 cm or less) on one or more surfaces. Seventeen pitted cobbles exhibit depressions on opposite faces and three of these implements contain three to four pits. Pitted cobbles were recovered from between Levels 1.2C to 11 in Block D. This distribution incorporates Middle Archaic through Late Woodland occupations. Specimens recovered from Blocks A, B, and C also fall in this cultural range. One pitted cobble recovered from Level 13, Test Pit 2, 119S/113W, probably represents an Early Archaic period affiliation. Generally, pitted cobbles are present in greater numbers in levels containing Late Archaic occupations.

A single artifact was identified as a celt fragment (Figure 7.76a). This specimen is a polished, greenstone spall. The artifact is trianguloid with slightly excurvate lateral margins and a rounded distal edge; the cross section is plano-convex. The spall is slightly battered. The artifact was recovered from Level 2, Block A, and probably dates to the Middle or Late Woodland occupation.

A single edge ground cobble was identified. This waterworn cobble fragment exhibits light abrasion of one edge section and was recovered from Level 5 of Block C.

Hammerstones (52) exhibit pecked or battered areas on one or more surfaces or edges (Figure 7.76b-d). Thirty seven of this type were spherical and made from cobbles or cobble spalls (Figure 7.76b, c). The remaining 14 hammerstones were bifacial (Figure 7.76d).

Hammerstones were recovered principally from Levels 1.1B to 11 in Block D and in similar contexts in other blocks. Seventeen specimens were recovered from Levels 1.1 to 6 in Block D with the heaviest concentrations (14) in Levels 1.1B to 3. A second "cluster" of hammerstones occurred in Levels 8 to 11, Block D. Ten examples were found in this context. A single hammerstone found in Early Archaic context was recovered from Level 16, Block A.

Five mullers (manos) (Figure 7.77a), incuding three fragments, were recovered from the site. These tabular, cobble artifacts of ferruginous sandstone exhibit a smooth, ground surface(s). Pecked "swales" are present on one or more surfaces of two specimens and

suggest that these artifacts may be incipient pitted cobbles. Mullers/manos were recovered from Levels 2 and 7, Block D; Level 3, Block A; and Feature 57.

Implements typed as mortars (metates) exhibit broad, shallow, pecked or ground depressions. The specimens were manufactured from sandstone or ferruginous sandstone. One specimen from Block D exhibits a circular, pecked depression and may represent a pounding anvil (mortar) (Figure 7.77b) versus a grinding platform (metate) (Figure 7.77d). These implements were recovered in Levels 1.1B, 5 and 9, Block D; Levels 2 and 11, Block A; Level 4, Block D; and Level 3, Block C. Generally, these artifacts appear to correlate with Middle Archaic and later occupations. A single pestle (Figure 7.77c) was recovered from the site in Level 4, Block C. This implement appears to be a modified, waterworn cobble. The distal surface is flat, ground, and sits at an oblique angle to the length of the tool. The proximal end has been worked flat and parallels the distal working surface. All edge margins are rounded. Several flakes have been removed from the "forward edge" of the distal surfaces. Whether these were struck off to intentionally modify this edge or through use is uncertain.

The multi-purpose ground and polished stone tools (18) include a series of artifacts that exhibit multiple typological attributes. Whether these artifacts represent distinct types, varieties of other tool forms, or recycled implements is uncertain and should be examined in future analysis. The majority of the multi-element artifacts (13) are characterized by the presence of a pit or depression (anvil) as a secondary wear pattern on another tool form, such as an abrader, mortar, muller, or hammerstone. The remaining specimens are combination hammerstone/mullers.

The distribution of these artifacts is confined to Levels 1.3C to 10, Block D, with four specimens clustered in Levels 9 and 10, three in Level 2, and three in Levels 1.3C and 2. One each was found in Features 16,21, 31, and 49. Block A yielded a multi-element tool from Level 8. From Block B, one was recovered from Levels 1 and 3. Two were recovered from Block C, one from Levels 1 and 2. Generally, these implements correlate with the Middle Archaic and later occupations.

The second major grouping of ground and polished ground stone artifacts are articles. These specimens may have formed a part of an implement or tool, but probably were not directly employed in manufacturing or processing activities. The article group includes atlatl weights, beads, boatstones, discoidals, gorgets, and tublular pipes. Seven drilled, polished stone atlatl weight fragments were recovered (Figure 7.78a-b). One specimen probably was triangular or rectangular in form and a second one was biconvex. Five of these artifacts were recovered from Block D,

one from Level 5, three from Level 9, and one from Level 10. The remaining specimen was recovered from Feature 71, located in Block A. This features was a pit containing two Eva/Morrow Mountain projectile points. Five atlatl weights appear to be associated with the Middle Archaic occupation(s).

A series of bead preforms and beads were recovered. Seven artifacts were classified as bead preforms (Figure 7.78d-g). These specimens are undrilled (5) or incompletely drilled (2) artifacts exhibiting morphological and technological characteristics similar to the bead types. Tabular, rectangular, and disk forms manufactured from hematite (5) and sandstone (2) are present. All were recovered from Block D, Levels 1.1B to 5.

Twenty-one ground and polished beads and bead fragments were recovered (Figure 7.78h-k). Disk-like, rectangular, spherical, and tabular forms are present. Jasper (3), hematite (6), siltstone (3), and ferruginous sandstone (9) were employed in the maufacture of these artifacts.

The largest number of beads was recovered from Block D (10). The specimens were found in Levels 1.2B through 8 (none in Level 6). Two beads also were excavated from Level 5, Block A; four from Levels 5 to 7, Block B; and five from Levels 1, 3, and 4, Block C. This distribution suggests that these artifacts were introduced into the site during the Late Archaic Benton occupation and may have persisted into Late Woodland/Mississippian times.

A single drilled, boatstone fragment (Figure 7.78c) was recovered from Level 1.1B, Block D. The specimen is rectanguloid with a slightly excurvate end. The end contains a ca. 5 mm hole drilled 2 mm from the "upper" edge. Wall thickness varies from ca. 3 to 5 mm. The concavity measures ca. 14 mm deep.

A single discoidal manufactured from hematite was recovered from Level 1.1B, Block D. One surface of this 1.9 cm in diamter artifact is slightly concave. The other surface is flat. The edge is ground and round.

Two artifacts were identified as gorgets (Figure 7.78 1-m). One is a V-shaped, biconvex, hematite fragment that presumably is the side ("lateral") or the end. The second specimen is a tabular, pentagonal (?), drilled, polished, hematite artifact (Figure 7.78m). This gorget probably would be more accurately described as a pendant. Both items were recovered from Block D. The "lateral" fragment was found in Level 5 and the "pendant" in Level 1.3C.

The tubular pipe fragments of ferruginous sandstone were recovered from Level 5, Block D. The exterior of both specimens is polished while the interior is ground. One specimen exhibits an

angled "corner" which suggests that the artifact was trianguloid or rectanguloid in form. The second specimen exhibits a circular outline based on the arc of the fragment. This second cylindrical "pipe" had been grooved on both ends and subsequently snapped. The length of this artifact, ca. 17 mm, and its estimated diameter, ca. 15 mm, closely approximates several of the beads and bead preforms recovered from the site. The recovery of these artifacts suggests a Late Archaic period context.

The miscellaneous ground/polished stone group is a catch-all for the groundstone category. It includes by products, unidentified fragments and types not incorporated in the groups described above.

A series of drill cores (8) were recovered from the site (Figure 7.78n-o). These artifacts are truncated cores exhibiting polished sides and normally unworked proximal and distal surfaces. The top and bottom surfaces often appear to have been formed by snapping or breaking. Generally, the larger distal (?) end is slightly convex and the proximal (?) teminus is slightly concave. The drill cores are by-products of artifacts manufactured from hematite (5), quartzite (1), ferruginous sandstone (1), and siltstone (1).

One drill core was recovered in each of Levels 1.2C, 5, and 8 in Block D. Block A produced two of these artifacts, one from Level 10 and one from Feature 71 which was defined in Level 11. Block C yielded two specimens from Levels 6 and 7. The majority of these specimens, therefore, appear to correlate with Middle and Late Archaic components.

A series of ground/polished stone flakes (51) were recovered from the site and were classed as "other." These flakes exhibit a ground/polished surface or surface section. Flakes included in this type largely were distributed throughout the upper section of the site. Block D yielded ground/polished flakes (35) from Levels 1.1 through 10, except Level 6. Two flakes were also recovered from Levels 16 and 17, in Block D. One specimen, however, exhibited a serrated surface. Four flakes were recovered from Block A, Levels 6 and 11. Two specimens were found in Levels 2 and 9, Block B. Block C yielded flakes from Levels 2, 9, and 13. Generally, most ground/polished flakes coincides with Middle Archaic and subsequent occupations although a few specimens were recovered from Early Archaic context as well.

Ground hematite and limonite form a third by-product type. Specimens included in this category normally are fragments which exhibit an abraded to straited surface. Presumably these materials were utilized as a pigment source.

Worked limonite fragments (56) were recovered from all excavation blocks and were distributed in Levels 1 to 11. Block D produced 34 examples that clustered in Levels 1.1 to 2 (23), Levels 4 to 8 (7) and Levels 9 to 11 (4). Block A yielded four specimens, two from Level 1, one from Level 3, and one in Level 11. Four worked limonite fragments were recovered from Block B, three in Level 1 and one in Level 6. Block C produced five specimens of this type, one each in Levels 2, 3, 5, 6, and 8. Features 4 and 91 also yielded specimens of this type.

Worked hematite fragments (30) were concentrated in Block D. Twenty specimens clustered in Levels 1.1 to 3 (14) and 8 to 10 (6) in this block. Block A produced three fragments from Levels 1, 4, and 9. Levels 1 and 10, Block B, contained hematite fragments. Three specimens also were recovered from Features 31, 44, and 70, all of which were situated in Block D.

The distribution of worked hematite and limonite suggests that these materials correlate with the Middle Archaic occupation(s) and the ceramic components which range from Gulf Formational to Late Woodland Mississippi. There is a general dearth of this type in levels principally assigned to the Late Archaic period.

A series of sandstone sherds was recovered from Block D. All were contained in Levels 1.1 to 5, excepting Levels 1.3 and 4. These sherds are basically tabular sandstone fragments that exhibit weathered surfaces and rounded edges. The sherds are thick, ranging between 10 and 20 mm. The distribution of this type from Level 5 and above suggests a Terminal Archaic and later context.

Ground stone tools were most numerous in Blocks A and D, extending to Level 17 (79.4-79.5 m). A bimodal distribution was again apparent in the vertical distribution of these implements.

<u>Introduced Rock</u> (not illustrated):

Discussion: The Introduced Rock category contains specimens which do not exhibit deliberate use and yet do not occur on the site naturally. They have been brought to the site by the human occupants. As can be seen in Appendix I and Tables 7.44-7.47, the vast majority of introduced rock is sandstone, followed by fire cracked chert chunks, and cobble pebbles. A vast array of consistent but low frequency rock types follows the dominants. The frequency distribution of the introduced rock types coincides with the intensity of occupation, and correlates with the 0.25 inch non-utilized debitage distribution.

The use of the dominant ferruginous sandstone cannot be fully explained, however, it is locally available in the terraces and

uplands. In fact, it is the most abundant rock type in the Upper Tombigbee Valley. It is likely that it was used as for every day needs in food processing, tool manufacture, and cooking. A few concentrations were recovered which indicate it was used for "hot rock cooking" or baking. Fire cracked chert chunks are, of course, the product of thermal alteration. This is thought to result from overheating chert cobbles in preparation for tool maufacture. Chert was the primary raw material of chipped stone tools and thermal alteration (heating) was used throughout prehistory in this region. The presence of fire cracked chert chunks on the site in consistent frequencies (3 to 4 percent averages) is expected and reflects this technological step.

Historic Material

A total of 176 historic specimens were recovered at 22IT576. These are presented in Tables 7.48-7.52. The types of remains include hunting and fishing implements (13), metal container fragments (64), fasteners (13), wire nails (77), and miscellaneous material (9). Most of the historic/modern material was recovered in the mixed upper 50 cm of the site deposits and historic entrusions. The range of materials reflects the historic activities which are known to have occurred at the site: logging, cultivation, pig containment, relic collecting, hunting, and fishing.

Biotic Remains

Both floral and fanal remains were recovered from the Poplar site and consisted primarily of charred fragments. The procedures for recovery, processing and analysis are presented in Chapter 4 and Appendix III to this report. The biotic material from 22IT576 is discussed separately below.

Flora

A large amount of charred floral material was recovered from the Poplar site. The fragments consisted primarily of hickory nutshell and wood. The samples submitted for analysis included seven cultural features, three burials, and eleven control block samples. The control block samples were even-numbered levels from Block D (2-16) and one level sample from each of excavation Blocks A, B, and C. The provenience, sample size, and analysis data from each sample are presented in Table 7.52.

In agreement with the floral remains recovered from the other sites in the project, the identified floral remains are dominated by carbonized hickory nutshells (Carya spp) and acorn (Quercus spp) fragments. Only three identifiable seeds were recovered (pokeweed, yellow star grass, and lady's thumb or common sorrel). Fragments of wood were present in all samples and consisted of hardwood, pine, and indeterminate woods. Two fragments of cane were also recovered. Seed and fruit parts were identified as well as hickory involucres or acorn husks.

The macrobotanical analysis indicates at least two factors in the occupation of the Poplar site:

1. The sample from the Benton/Sykes-White Springs component (Block D, Level 6:80.5-80.6m) has the highest occurence of hickory nutshells of any midden sample.

2. In the seed category, the midden samples were dominated by fern spores and only the features contained other types of seeds and fruit fragments.

The increase in charred hickory nutshells in the Benton/Sykes-White Springs component midden sample coincides with other lines of evidence that the use of this site was intense during that time. The large number of features, the presence of structures or at least activity centers, hearths, burials, and numbers of artifacts point toward long-term use of the site as a base camp for several residential groups. The large amount of charred hickory nutshells in the midden was expected due to their use as food and fuel.

The presence of so many fern spores in the midden samples from the Early Archiac (Levels 14 and 16) through the Late Archaic components (Level 4) probably reflects a park-like site vegetation. This is present today in similar floodplain elevations with older second growth. The canopy is closed, effectively shutting out sunlight and eliminating shrubs and bushy plants and encouraging the growth of fern-like vegetation on the dark, moist surface.

The features contained the most diverse botanical remains. The cultural affiliation of the features ranges from the Gulf Formational (Feature 5, a hearth) through the Early Archaic (Feature 111, a pit). All examined features had botanical remains, however, the diversity was poor. Feature 5 had squash, seed, and fruit remains in addition to hickory nutshell and wood. The high amount of oak in the feature may indicate its use as firewood. Feature 71 (a Sykes-White Springs pit) also contained two seeds along with many hickory nutshells. Another pit associated with the same component (Feature 85) contained cane fragments. Three burials were examined (3, 4, and 11) for botan-

ical remains. All contained minor amounts of hickory nutshell, acorn and wood, but Burial 11 (Benton/Sykes-White Springs) also contained fruit remains (pericarp or fruit wall).

With the botanical information at hand, it is possible to hypothesize about the seasonal use of the Poplar site during the Benton/Sykes-White Springs component. The presence of hickory and acorn (fall) and fruit (spring and summer) indicate at least a three season occupation. Winter use is difficult to document from any site due to lack of preservable seasonal indicators.

The information continued in the macrobotanical material from the Poplar site is highest in the Benton/Sykes-White Springs and Kirk components. Identifiable remains are present and there is a diversity of plant types represented. Further research will provide valuable information on the early occupations as well as the unusual and intense Benton component.

Fauna

A total of 4,953 faunal fragments was analyzed from the Poplar site. The material analyzed was the total 0.25-inch bone sample recovered from the 1980 excavations, and consisted primarily of calcined and charred fragments. Of almost 5,000 bone specimens, only 609 (12%) were identifiable past the class level of identification. This was due primarily to the small size of the bone fragments. Even though all the 0.25-inch bone sample was identified, it should be recognized that this represents a small and unknown amount of the total bone material that was once present at the site. Due to this situation, the faunal collection is best viewed as qualitative rather than quantitative. Quantitative changes are present in the amount of bone in the midden and features, but it is not known if this is due to preservation conditions or procurement strategies.

The identifiable faunal material included mammals (both large and small), birds, reptiles, and fish (Table 7.54). The distribution of the faunal remains is presented in Tables 7.55, 7.56, and 7.57.

Most of the faunal material from the midden in the excavation units came from Block D. The majority (95%) of the material was located in the upper 50-60 cm (to 80.6m) and cannot be associated with a single component but rather from the Gulf Formational through Mississippian Stage components. Of course, the greatest diversity of fauna is represented in this culturally mixed sample, including green heron, hawk, deer, dog, rabbit, human, snake, turtle, and fish. The general pattern indicates that a

wide range of animal resources were used and the numbers of specimens suggest a steady reliance on turtles.

The Benton/Sykes-White Springs component midden (80.6-80.0) contained a small amount of faunal material (244). Identifiable specimens included box turtle, deer, bird, and turtle sp. Indeterminate mammal bone made up over 90 percent of the material.

The Middle and Early Archaic components had very little faunal material (7), all of which was indeterminate mammal. No patterns can be detected.

The overall presence of faunal material by level throughout the site reflects an abundance of bone through 80.6 m (7,300 specimens), a decline in the next 10 cm (127), and a sharp and rapid decrease in the succeeding levels (§20). An interpretation of this is not really possible due to the unknown and uncontrollable factors of preservation and procurement.

A total of 640 bone fragments was recovered from features (13) and burials (5). Out of this sample, 83 (13%) were identifiable to at least the class level. As can be seen in Table 7.57 the range of fauna included mammal, birds, reptiles, and fish remains.

Of the 13 features containing faunal material, the cultural affiliation of six can be determined. They are as follows:

Feature 5: Gulf Formational hearth
Feature 21: Gulf Formational rock cluster
Feature 26: Benton pit
Feature 28: Benton fired aggregate
Feature 29: Benton fired aggregate
Feature 38: Benton fired aggregate.

The Gulf Formational hearth contained the most material (76) consisting of passerine (bird), snake, and fish, along with gastropod, pelecypod, and indeterminate mammal bone. The remaining features had only unidentifiable mammal bone except Feature 38 in which one deer bone was also recovered.

The biotic remains at 22IT576 indicate a diverse hunting, gathering, and fishing economy and, possibly, a squash horticulture practiced during the Gulf Formational.

Quantitatively, in both features and midden deposits, the Benton-Sykes-White Springs component contained the most faunal remains. This suggests a more intense occupation during this occupation and is in harmony with other lines of evidence.

The five inhumations included one culturally mixed cremation (19), two mixed burials (2 and 3), and two Benton burials (5 and 17). Burials 3 and 19 (a cremation), though mixed, contained the most numerous and varied faunal remains.

Benton Burial 17, however, had rabbit, squirrel, bird, snake, fish, and indeterminate mammal in the fill. This is the most diverse fauna that can be associated with the Benton component.

Summary of Biotic Remains

The biotic remains from the Poplar site were handled differently. A representative sample of botanical remains from the midden and features was processed and analyzed by the project archaeobotanist, whereas the entire faunal collection was analyzed by the zooarchaeological consultant.

The plants and animals identified from 22IT576 are common to the floodplain and terraces of the Upper Tombigbee Valley. Given the preservation problem in these types of sites, the range of biota in the recovered sample should be viewed as the minimal number available for utilization.

Discussion and Interpetation

Components

The determination of components at 22IT576 was based on the presence and position of temporally sensitive artifact types. As with all but the exceptional site, mixing (both in the prehistoric and recent past) has occurred by both cultural and natural forces. Prehistoric cultural mixing was due to pit digging and general surface activity. The primary effect of this has been to bring earlier temporal markers up into later deposits and to "blur" the beginning and end of recognized chronological periods. The recent disturbance has been caused by the digging of holes by relic hunters (up to 1.4 m deep and 2.6 m wide), clearing and stump removal, cultivation, and the containment of hogs. The relic hunting holes and stump removal were the most severe and have effectively destroyed at least the upper 50-60 cm of the site deposits. Localized disturbance was, of course, deeper in some of the potholes.

The designation of components from the material remains at 22IT576 had to take these disturbance factors into consideration. Keeping these factors in mind, ten components have been recognized at the site (Table 7.58) which include the prehistoric

period from the Early Archaic through the Mississippian Stage. Only three of these have both intact midden and features: Kirk, Eva-Morrow Mountain, and Benton/Sykes-White Springs. Three components had intact features but lacked midden deposits: Wheeler, Alexander, and Miller III.

Archaic Stage

Early Archiac: Kirk

The Kirk component represents the first occupation of the Poplar site. The distribution of the Kirk material remains consists of two identifiable assemblages in Block D which are vertically separated by 10-15 cm of sediments. The component is contained within the Early Holocene paleosol (also a midden) within which three zones were identified (Strata 6, 7, and 8). The integrity of this component is the highest of all recognized at this site. The lower portion of the paleosol (below 79.8 m: Level 14) contains only Early Archaic projectile point types (Tables 7.62-7.63). The upper portion of paleosol has been truncated by erosion (at this and all other sites in the Upper Tombigbee Valley) and ususally contains the initial Middle Archiac, Eva/Morrow Mountain component. The Kirk occupation was identified only in Block D. This is likely the former epicenter and was occupied due to its high elevation.

Features associated with the Kirk component include five chipped stone clusters (Features 113, 116, 118, 119, and 120) and at least one pit (Feature 117). The chipped stone clusters contained a variety of complete and broken tools including scrapers, knives, cores, bifaces, and utilized flakes. Much debitage was also present in the features. The pit contained only flakes and introduced rock. It is likely that an additional chipped stone cluster feature was also present but not recognized by the excavators. In the most northwestern unit of Block D (108S/108W) between 79.6 and 79.7 m (Level 15) over 800 flakes were recovered. This was in direct contrast with the preceding and succeeding levels in which less than 100 specimens occurred. The distribution of Kirk cultural material was concentrated in two layers which were separated by 10 to 15 cm of relatively sterile sediments. These are labeled the lower assemblage (occurring generally between 79.5-79.6 m) and the upper assemblage (occurring between 79.7-79.8 m). Both assemblages extend across the entire block. The lower assemblage contained six projectile point/knives: Kirks (3), Big Sandy (2), and Greenbrier (1). The association of these types appears to be correct for the initial Early Archaic stage of the UTV, occurring also at 22IT590. With good stratigraphic, if not radiometric, controls at both sites,

it seems that they were contemporaneous within the same cultural phenomenon. The upper assemblage contained two Kirks.

The midden material in the paleosol of the Early Archiac occupations at the Poplar site consist of lithic and floral material. Tools are both complete and broken and consist of projectile point/knives, scrapers, bifaces, spokeshaves, drills, perforators, abraders, flake knives, adzes, splintered wedges (piece esquilles), ground stone tool fragments, and utilized flakes. Non-utilized debitage was abundant (4581) as was introduced rock (3290 g). Floral remains from the Early Archaic component consisted of wood, hickory nutshells, fern spores, wood fragments, and bark fragments.

From the features and midden material of the Early Archaic component, a few preliminary statements can be hypothesized concerning the nature of the occupations.

1. Subsistence activities consisted of at least hickory nut collecting and hunting.
2. Processing activities such as butchering, hide preparation, and possibly vegetable food preparation were conducted.
3. Production and maintenance of stone stools occurred as well as woodworking.

The activities inferred from the cultural material of the Early Archiac Kirk component indicate that this locale was most likely used as a seasonal camp. The range and quantity of material remains suggest family groups. However, this remains to be pursued further.

Middle Archiac: Eva/Morrow Mountain

The diagnostic markers of the initial Middle Archaic component consist of Eva, Morrow Mountain, Cypress Creek, and Residual Triangular projectile point/knives. These forms predominate between 79.9 and 80.3 m at the site (Tables 7.59-7.63). This component is relatively restricted to the upper portion of the paleosol unit and has been truncated by erosion. It is likely that part of the Eva/Morrow Mountain component has been removed and that the subsequent occupation of the site by the following component caused some mixing. This is seen in the fact that some Sykes-White Springs and Benton specimens also occur within this zone, but these appear to peak later in the site's occupation.

A minimum of three features and one burial occur with this component. These are two fired aggregates (Features 38 and 77), one pit (Feature 90), and one burial (12). Each of these features contains diagnostics from only this component. Other features

which are likely associated with this component on the basis of stratigraphic position consist of two rock clusters (59 and 109), three fired aggregates (82, 82, and 94), three pits (103, 105, and 110), and one burial (16). In addition, fired aggregates 77 and 79 are associated with this component or the following Benton/Sykes-White Springs.

The midden deposits from the Eva/Morrow Mountain component contained a wide range of chipped and ground stone tools. Biotic remains were also associated with this component. It appears that during this occupation, the site was used as at least as a seasonal base camp. The activities conducted include hunting, gathering, food processsing, tool production and maintenance, woodworking, cooking, and inhumation (with grave goods).

Terminal Middle Archaic/Initial Late Archaic: Benton/SykesWhite Springs

The distributions of Sykes-White Springs and Benton projectile point/knives at the Poplar site are similar in initiation and frequency peak. Due to this similarity, these markers are considered to be part of the same cultural manifestation. This pattern was also seen at the Walnut site. In fact, in classification the attributes which distinguish the Benton and Sykes-White Springs types are similar (Figures 7.53 and 7.56) and they are both usually made of Ft. Payne chert. This similarity suggests they were produced from similar concepts for similar functions. This logically leads to the deduction that they were produced from the "same" archaeological culture and can be considered as representative of it.

The placement of this culture in the appropriate recognized period within the Archaic stage has been difficult due to the lack of agreement in the literature. However, the characteristics and time-span have been fairly well defined in this project and the "problem" of period assignment is only a semantic or classificatory one, not a cultural one.

The Benton/Sykes-White Springs occupation of the Poplar site between 6,000 and 5,000 years ago was measurably different than any previous or following component. It was also strikingly similar to that encountered at the Walnut site, 16 km to the north. The primary characteristics of this component included the following:

a. Activity centers or prepared areas which consist of fired clay loam from 2.6 to 4 m in diameter. Associated with these are fired aggregates, pits, postholes, inhumations, and cremations.

b. The midden deposit (80.3-80.6 m) had extreme concentrations of charred floral and faunal remains, especially burned hickory nut shells.
c. The midden deposit was extremely abundant in artifactual remains.

The Benton/Sykes-White Springs occupation was the most intense of any previous component. Due to the mixing of all following components, it is difficult to measure or compare it to later occupations; however, there are no indications of any following similar utilizations of the Poplar site.

The majority of features at the site result from this occupation (Table 7.10). The range and type of these feaures indicate that the site was used for a long-term base camp. This is the only component for which structures are indicated. As was discussed in the feature section of this chapter, at least three activity centers or residential areas can be identified. These include the Feature 44 complex, the Feature 99 complex, and the complex in the southeast corner of Block D.

The midden resulting from this component is distinguishable from other portions of the dark organic zone by the darker color (Figure 7.13). This is due to the high density of charred wood and hickory nut shells included in the sediment. Also during this 1000 year period, it appears that there was a decrease in depositional rate, thereby enhancing the density of the midden. The contemporanity of the features or activity centers cannot really be addressed. The major feature complexes occur vertically within a 10 cm zone; however, the entire deposit is only 30 cm thick.

As a brief review of Tables 7.59 and 7.63 will reveal, the suggested midden zone for this component (80.3-80.6 m) has many specimens from later occupations. In fact, 25 projectile point/knives ranging from Late Woodland/ Mississippian Triangulars to Little Bear Creek/Flint Creek are present. In addition, 765 sherds from mixed cultural components are present. There are also ten projectile point/knives from earlier components. The designation of this 30 cm as the "midden" for the Benton/Sykes-White Springs component is based on the peak in frequency of the Benton and Sykes-White Springs types and the plethora of affiliated features. The content of the midden is likely mixed with material from earlier and later occupations. Therefore, in the material recovered from that portion of the site, deposits should be examined for general patterns rather than specific, detailed comparisons. The primary pattern observed is the increase in the amount of tools and debitage of Fort Payne chert. The small size of the flakes, lack of cores or preforms, presence of caches of quarry blades, and many projectile point/knives indicate that this raw mateial was introduced to the site in refined form and conserved through rejuvenation and

resharpening. As Ahler pointed out (Appendix III), the Benton projectile point/knives indicate use as multiple purpose tools. The decrease in frequency of other tool types also occurs at this time. The reasons behind this increase in dependence on a foreign raw material for basic stone tools is unusual though consistent with Benton/Sykes-White Springs components in the UTV. The use of local raw materials does continue, but in decreased frequencies during this cultural component.

The increase in site occupation intensity and decrease in sediment deposition during the Benton/Sykes-White Springs component could possibly be correlated with the mid-post glacial climatic maximum. During this period, the environment was drier than any other time during the Holocene. This likely resulted in environmental stress in the uplands for both human groups and the resources on which they depended. Therefore, an increase in the use of the floodplain is a logical step and alteration of resource scheduling and settlement patterning occurred. The floodplains would concentrate the available moisture and biomass and have a higher tolerance to decreases in effective rainfall or changes in the pattern. From the settlements at the Poplar and Walnut sites, it appears that this is the case during 5-6,000 years ago in the Upper Tombigbee Valley.

Gulf Formational Stage

The Poplar site was occupied during the Gulf Formational Stage, including both the Wheeler and Alexander Horizons. Unfortunately, the deposits containing the cultural material have been disturbed. The temporally sensitive Wheeler and Alexander series ceramic types are present in significant numbers. While the midden deposits are destroyed, three features can possibly be associated with the Gulf Formational occupations.

These include a hearth (Feature 5) and two rock clusters (Features 6 and 21). All three features have diagnostic ceramics associated, however, the midden is culturally mixed and the features are shallow. Therefore, the ceramics could have been intruded into them accidentally.

The hearth contained many macrobotanical specimens, including pieces of Curcubita rind. If this feature is from the Gulf Formational, this is the first documentation of horticulture in the Upper Tombigbee Valley at this early a time. The Alexander occupation has been dated at 2400 B.P. at the Aralia site, 10 km north of the Poplar site. Both Wheeler and Alexander series sherds are associated wth the hearth, and the feature could be older than the above date. The Wheeler component has not been dated in the UTV, however, it likely extends to 3000 B.P.

Woodland and Mississippian Stages

The Poplar site was occupied during the Woodland and Mississippian stages. However, the integrity of the deposits has been destroyed and little can be said of the culture. Thousands of sherds from the Woodland periods were present, however, only one ceramic cluster (Feature 122) was encountered. This is actually a large portion of a shell/grog vessel which had been broken in place. No other features from these occupations were recovered. It is unfortunate that such disturbance had occurred, as the Woodland and Mississippian occupations appear to have been intense as indicated by the amount of cultural material, including flora and fauna, which cannot be meaningfully associated.

Summary and Recommendations for Future Study

The Poplar site was a small (50 by 50 m) multicomponent site in the floodplain of the Upper Tombigbee Valley. The site was occupied for over 10,000 years by all recognized prehistoric cultural groups. The research design for the investigations conducted was oriented toward the Archaic occupations, as testing had indicated these were still intact. All areas of the site were investigated during the eight month long fieldwork period. This resulted in the identification of 118 features, 134,360 counted specimens, and 846,474 g of weighed material.

The excavations basically produced the expected cultural components and confirmed that the Archaic deposits were intact (Benton through Kirk). The expected Paleo-Indian component was not encountered, and the complete Quad point recovered in testing was associated with the Kirk component and was out of context.

The initial identification of the Early Holocene paleosol was made at 22IT576 and it has since been documented at five other sites in the floodplain of the UTV (22IT539, 621, 623, 624, and 643). In each case when the paleosol has been investigated, it reveals Early Archaic components and is a recognizable time/cultural/stratigraphic marker.

The most significant results of the investigations at the Poplar site are threefold: 1) the isolated Early Archaic Kirk assemblages, 2) the preservation of an intense Benton/Sykes-White Springs occupation, and 3) the correlation of early Holocene (5 to 10,000 B.P.) site use changes with the established climatic and soil dynamics.

The most important avenues of future research from the Poplar site include the following:

1. Intense analysis of the Kirk assemblages according to morphology, technology, function, and use phase. The rarity of these early cultural remains, lack of knowledge of this culture, and the excellent context demand that all available information be gleaned from this data set.
2. Floral and faunal analysis of the complete samples from Benton/Sykes-White Springs features (especially fired aggregates, prepared areas, and pits) to address the hypothesis of year-round occupation by extended family groups.
3. Re-analysis of all cultural remains from the Benton through Kirk components by morphology, technology, function and use phase. This will form a basis of comparison for the intact deposits to which questions of changing site use and subsistence patterns can be addressed.
4. As was indicated previously, the debitage at 22IT576 showed several trends which appeared to coincide with component. These trends are the proportion of heated and non-heated Camden chert, frequency changes in Ft. Payne chert, and the size of Ft. Payne chert. The correlation and analysis of these debitage changes with the Archaic occupations can be tested at other similar site (22IT539, 22IT590) to arrive at patterns of the UTV area.

The Poplar site adds significant and unique information to our understanding of early ways of life in the Upper Tombigbee Valley. The preliminary analysis performed thus far has only identified the potential for its contribution to Early to Mid-Holocene adapatations in Southeastern North America. Research questions on the lifeway and processual level which can rarely be asked of any site in the Southeast can be addressed to the data set recovered from 22IT576. The resulting information will form the baseline of early human ways of life and environmental adaptation in the Mid-South.

Table 7.1. Site 22 IT576. Classification of Soils in the Site Vicinity.

Soil Series	Classification
Harleston	coarse-loamy, siliceous, thermic Aquic Paleudults
Kirkville	coarse-loamy, siliceous, thermic Fluvaquentic Dystrochrepts
Luverne	clayey, mixed, thermic Typic Hapludults
Mantachie	fine-loamy, siliceous, acid, thermic Aeric Fluvaquents
Ora	fine-loamy, siliceous, thermic Typic Fragiudults
Smithdale	fine-loamy, siliceous, thermic Typic Paleudults

Table 7.2. Site 22IT576. Munsell Colors of Selected Soil Horizons of Representative Soils in the Floodplain Adjacent to the Site.

Sample	Depth (cm)	Munsell Color (moist)
Hole #1 North	75-90	Gray (10YR 5/1)
Hole #1 North	100	Gray (10YR 5/1)
Hole #2 South	30-50	Light gray (10YR 7/2)
Hole #2 South	50-70	Light gray (10YR 7/2)
Hole #2 South	70-92	Light brownish gray (10YR 6/2)
Hole #2 South	92-112	Gray (10YR 5/1)
Hole #3 South	50-75	Light gray (10YR 7/2)
Hole #4 East	25-50	Gray (10YR 5/1)
Hole #5 West	10-30	Dark brown (10YR 4/3)
Hole #5 West	50-70	Light brownish gray (10YR 6/2)
Hole #6 West	80-100	Gray (10YR 6/1) with (10YR 5/6) mottles
Hole #7 Southwest	65-75	Gray (10YR 6/1)
Hole #8 Southwest	0-30	Pale brown (10YR 6/3) and gray (10YR 5/1)
Hole #8 Southwest	30-40	Light gray (10YR 7/2)

Table 7.3. Site 22IT576. Particle Size Distribution, pH and Organic Matter Contents of Representative Soils Adjacent to the Site.

Sample	Depth (cm)	†Sand	Silt	Clay	‡Texture	pH	Organic Matter
			%				%
Hole #1 North	75-90	52.6	26.7	20.7	SCL	4.4	1.02
Hole #1 North	100	56.9	23.4	19.7	SL	5.0	0.43
Hole #2 South	30-50	45.2	29.9	24.9	L	4.9	0.57
Hole #2 South	50-70	76.6	13.5	9.9	SL	4.6	0.21
Hole #2 South	70-92	84.3	10.6	5.1	LS	5.1	0.15
Hole #2 South	92-112	79.6	9.8	10.6	LS	5.3	0.17
Hole #3 South	50-75	47.0	28.0	24.[illegible]	SCL	4.3	1.54
Hole #4 East	25-50	24.4	36.1	39.5	CL	4.3	2.69
Hole #5 West	10-30	42.7	27.4	29.9	SCL	4.8	1.42
Hole #5 West	50-70	41.4	27.7	30.9	CL	4.9	0.60
Hole #6 West	80-100	55.9	22.9	21.2	SCL	4.8	0.33
Hole #7 SW	65-75	40.6	30.5	28.9	CL	4.6	0.65
Hole #8 SW	0-30	36.8	38.5	24.7	L	4.9	1.58
Hole #8 SW	30-40	41.9	34.3	23.8	L	5.2	1.08

†Sand = 2-0.5 mm; Silt = 0.05-0.002 mm; Clay = <0.002 mm

‡L = loam; SL = sandy loam; SCL = sandy clay loam; LS = loamy sand; CL = clay loam

Table 7.4. Site 22IT576. Pedon Description of Representative Profile

Depth (cm)	(moist colors) Description
0-10	Dark reddish brown (5YR 3/2) loam; moderate fine and medium granular structure; very friable; many fine and medium roots; few small black (10YR 2/0) charcoal fragments; greasy when rubbed; strongly acid; clear smooth boundary.
10-51	Dark reddish brown (5YR 2.5/2) loam; moderate fine granular structure; slightly firm in place, friable when disturbed; many fine and medium roots; few small charcoal fragments; common small and medium very dark gray (10YR 3/1) and dark gray (10YR 4/1) potsherd in upper part of horizon; medium acid; greasy when rubbed; gradual wavy boundary.
51-75	Dark reddish brown (5YR 3/3) loam; weak fine granular structure; slightly firm in place, friable when disturbed; common small roots; few mottled dusky red (2.5YR 3/2), reddish brown (2.5YR 4/4), yellowish red (5YR 5/8) "fired aggregates"; common small black charcoal fragments; medium acid; greasy when rubbed; gradual wavy boundary.
75-87	Dark reddish brown (5YR 3/2) and strong brown (7.5YR 5/6) loam with streaks of light brownish gray (10YR 6/2) and black (10YR 2/0); weak fine granular structure; very friable; abundant black and very dark gray multi-sized charcoal fragments; few fine roots; medium acid; gradual wavy boundary.
87-97	Dark reddish brown (5YR 3/2) and strong brown (7.5YR 5/6) sandy loam with common medium light brownish gray (10YR 6/2) mottles; weak fine granular structure; friable; common black charcoal fragments; medium acid; gradual wavy boundary.
97-113	Reddish brown (5YR 4/4) and strong brown (7.5YR 5/6) sandy loam; weak fine granular structure; slightly firm; few fine charcoal fragments; few fine round black concretions; slightly acid; gradual wavy boundary.
113-120	Strong brown (7.5YR 5/6) and dark brown (7.5YR 4/4) loam; weak fine granular structure; slightly firm; few fine black concretions; purple stains extend vertically; slightly acid; gradual wavy boundary.

Depth (cm)	(moist colors) Description
120-130	Strong brown (7.5YR 4/6) loam with common medium brown (10YR 5/3) mottles; weak fine granular structure; slightly firm; common fine and medium round black concretions; purple stains extend vertically along ped faces; medium acid; smooth wavy boundary.
130-146	Dark yellowish brown (10YR 4/4) with common medium strong brown (7.5YR 4/6), dark brown (7.5YR 3/4) and yellowish red (5YR 5/8) mottles; weak fine platy structure that parts to weak fine subangular blocky structure; firm; thin seams filled with very pale brown (10YR 4/4) silt and very fine sand form an intermittent polygonal network; firm; patchy clay skins and intergranular bridging; common black ferro-manganese concretions; strongly acid; gradual irregular boundary.
146-184	Mottles pale brown (10YR 6/3), brownish yellow (10YR 6/8), strong brown (7.5YR 5/8), yellowish red (5YR 5/8) and red (2.5YR 4/8) loam; massive parting to weak fine subangular structure; firm; seams ranging to 0.5 cm width and filled with very pale brown (10YR 4/4) silt and very fine sand form a continuous polygonal structure, sand stripping has occurred in the seams; common ferro-manganese concretions; clay skins on ped faces and within larger pores; strongly acid; gradual irregular boundary.
184-200+	Mottled yellowish brown (10YR 5/6), pale brown (10YR 6/3), olive yellow (2.5Y 6/8), brownish yellow (10YR 6/8), and reddish yellow (7.5YR 6/6) loam; massive; slightly firm; few black ferro-manganese concretions; strongly acid.

Table 7.5. Site 22IT576. Particle Size Distribution of Representative Selected Soil Samples

Depth cm	Sand (2-.05 mm)	Silt (.05-.002 mm)	Clay (<.002 mm)	Texture
0-10	47.2	42.8	10.0	loam
10-51	48.4	37.2	14.4	loam
51-75	46.6	33.3	20.1	loam
75-87	48.8	30.9	20.3	loam
87-97	57.7	25.5	16.8	sandy loam
97-113	56.5	29.5	14.0	sandy loam
113-120	50.4	35.3	14.3	loam
120-130	42.7	39.6	17.7	loam
130-146	39.0	38.1	22.9	loam
146-184	38.3	36.5	25.2	loam
184-200	48.0	30.2	21.8	loam

Sand Fraction

Depth (cm)	Very Fine (2-1 mm)	Fine (1-.5 mm)	Medium (.5-.25 mm)	Coarse (.25-.10 mm)	Very Coarse (.10-.05 mm)
0-10	15.15	27.33	3.90	.42	.42
10-51	16.22	27.96	3.84	.30	.10
51-75	20.14	24.72	1.63	.10	.02
75-87	15.39	29.63	3.44	.25	.06
87-97	15.33	34.95	7.24	.12	.01
97-113	16.77	34.03	5.52	.14	.07
113-120	18.50	28.95	2.65	.23	.02
120-130	17.67	23.19	1.53	.25	.01
130-146	17.24	20.52	1.20	.04	.01
146-184	18.28	18.94	1.06	.05	.01
184-200	19.32	27.12	1.54	.04	00

Table 7.6. Site 22IT576. Bulk Density of Selected Horizons.

Depth cm	Bulk Density g/cc	H2O Content %
22	1.40	12.9
65	1.29	20.1
100	1.66	12.8
127	1.73	17.4

Table 7.7. Site 22IT576. Organic Matter, Free Iron Oxide, Total and Organic Phosphorus Contents of Selected Soils.

Depth cm	Organic Matter %	Fe_2O_3 %	Total P ppm	Organic P ppm
0-10	3.16	3.7	799.3	531.9
10-51	1.77	3.0	657.6	-----
51-75	1.53	2.0	927.9	217.4
75-87	1.90	2.0	846.4	101.1
87-97	0.74	1.4	955.6	-----
97-113	0.77	0.7	673.6	82.8
113-120	0.50	1.3	729.9	182.5
120-130	0.23	1.5	888.7	74.9
130-146	0.23	1.8	872.9	-----
146-184	0.21	2.0	1,191.7	-----
184-200	0.12		684.2	-----

Table 7.8. Site 22IT576. pH, Exchangeable Aluminum, and Extractible Acidity of Representative Selected Soils

Depth (cm)	pH	Exchangeable Aluminum	Acidity
		---milliequivalents/100 g soil-----	
0-10	5.3	.09	15.54
10-51	6.0	.03	11.45
51-75	5.7	.15	12.46
75-87	5.8	.05	12.18
87-97	6.0	.04	7.28
97-113	6.1	.01	6.49
113-120	6.1	.04	6.72
120-130	5.7	.45	6.64
130-146	5.4	1.53	8.52
146-184	5.3	1.91	8.94
184-200	5.3	0.88	6.34

Table 7.9 Site 22IT576. Radiocarbon dates.

Lab No. DIC - 2058 Field No. 576-1170

T ½ 5568: 4470±65
T ½ 5730: 4604±65
Calendric Date (uncorrected T½ 5730): 2654 B.C.
*(corrected T½ 5730): 3210-3320 B.C.
Sample: Carbonized nutshells and wood charcoal (minor)
Provenience: Control block 115, 75S/109.75W, Block D, Level 2 (81.0-80.9m)
Comments: Culturally mixed

Lab No. DIC - 1945 Field No. 576-1456

T ½ 5568: 5360±85
T ½ 5730: 5520±85
Calendric Date (uncorrected T½ 5730): 3570 B.C.
(corrected T½ 5730): 4270-4330 B.C.
Sample: Carbonized nutshells and wood charcoal
Provenience: Control block 115.75S/109.75W, Block D, Level 4 (80.8-80.7m)
Comments: Culturally mixed

Lab No. DIC - 1947 Field No. 576-1759

T ½ 5568: 5390±70
T ½ 5730: 5552±70
Calendric Date (uncorrected T½ 5730): 3602 B.C.
(corrected T½ 5730): 4330-4350 B.C.
Sample: Carbonized nutshells and wood charcoal (minor)
Provenience: Control block 115.75S/109.75W, Block D, Level 6 (80.6-80.5m)
Comments: Initial Late Archaic, Benton

Lab No. DIC - 1948 Field No. 576-2578

T ½ 5568: 5670±120
T ½ 5730: 5840±120
Calendric Date (uncorrected T½ 5730): 3890 B.C.
(corrected T½ 5730): 4530 B.C.)
Sample: Carbonized nutshells
Provenience: Control block 115.75S/109.75W, Block D, Level 8 (80.4-80.3m)
Comments: Initial Late Archaic, Benton and Late Middle Archaic, Sykes-White Springs

Table 7.9 (continued)

Lab No. DIC - 1949 Field No. 576-3341

T ½ 5568: 5820±155
T ½ 5730: 5995±155
Calendric Date (uncorrected T½ 5730): 4045 B.C.
(corrected t½ 5730): 4650 B.C.
Sample: Carbonized nutshells
Provenience: Control block 115.75S/109.75W, Block D, Level 10 (80.2-80.1 m)
Comments: Initial Late Archaic, Benton and Late Middle Archaic, Sykes-White Springs

Lab No. DIC - 2080 Field No. 576-3517

T ½ 5568: 4690±115
T ½ 5730: 4830±115
Calendric Date (uncorrected T½ 5730): 2880 B.C.
(corrected T½ 5730): 3410-3520 B.C.
Sample: Carbonized nutshells
Provenience: Several 2 by 2 m units combined, Block D, Level 11 (80.1-80.0m)
Comments: Probably Late Middle Archaic Sykes-White Springs

Lab No. DIC - 2085 Field No. 576-6792

T ½ 5568: 7210±650
T ½ 5730: 7426±650
Calendric Date (uncorrected T½ 5730): 5476 B.C.
(corrected T½ 5730): 5900 B.C.
Sample: Carbonized nutshells
Provenience: Block D, Levels 14-16 (79.8-79.5m), several 2 by 2 m units combined
Comments: Attempting to date the Early Archaic (Kirk)component. Sample collected from several units. Very small sample, 3.3 g.

*(Ralph, Michael and Han 1973)

Feature Type	Feature Number	Block	Level Defined	Level Origin	Length	Width	Depth	Cultural Affiliation Comments
Ceramic Clusters	122	TP	?	?	0.29	0.25	0.08	Late Woodland/Mississippian
Chipped Stone Clusters	9	A	5	5	0.28	0.22	0.10	Woodland (Late)?
	10	B	5	5	0.26	0.37	0.05	Initial Late Archaic (Benton)?
	16	D	1-2	1-2	0.80	0.52	0.09	Late Woodland/Early Mississippian
	113	D	14	14	0.85	0.70	0.07	Early Archaic (Kirk)
	116	D	15	15	1.10	1.06	0.07	Early Archaic (Kirk)
	118	D	15	15	1.05	1.14	0.11	Early Archaic (Kirk)
	119	D	15	15	0.93	1.05	0.06	Early Archaic (Kirk)
	120	D	16	16	0.20	0.61	0.01	Early Archaic (Kirk/Big Sandy)
Rock Clusters	6	B	2	1	0.57	0.41	0.10	Gulf Formational?
	21	D	3	3	2.42	1.85	0.13	Gulf Formational?
	43	D	7	7	0.17	0.29	0.08	Unknown
	56	D	8	8	0.42	0.09	0.01	Unknown
	57	D	8	8	0.17	0.11	0.04	Unknown
	59	A	8	8	0.14	0.12	0.05	Archaic (Morrow Mountain or Benton)?
	73	D	9	9	0.68	0.84	0.13	Unknown
	76	D	9	9	1.19	0.68	0.06	Unknown
	109	B	12	12	0.75	0.65	0.10	Middle Archaic (Eva)
Fired (Oxidized) Aggregates	8	B	4	4	0.90	1.12	0.06	Initial Late Archaic (Benton)
	11	A	5	4	0.30	0.08	0.08	Initial Late Archaic (Benton)
	14	D	1-3	1-2	0.51	0.39	0.09	Gulf Formational through Mississippian
	15	D	1-2	1-2	1.14	0.76	0.14	Gulf Formational through Mississippian
	17	D	1-3	1-3	0.95	0.30	0.01	Gulf Formational through Mississippian
	25	A	6	6	0.37	0.35	0.07	Initial Late Archaic (Benton)

Table 7.10. Site 22IT576. Feature classification and summary data

Feature Type	Feature Number	Block	Level Defined	Level Origin	Length	Width	Depth	Cultural Affiliation Comments
Fired (Oxidized) Aggregates	28	D	5	5	0.53	0.45	0.06	Initial Late Archaic (Benton)
	29	D	5	5	0.70	0.20	0.18	Initial Late Archaic (Benton)
	35	D	6	6	0.14	0.16	0.07	Initial Late Archaic (Benton)
	36	D	6	6	0.27	0.21	0.09	Initial Late Archaic (Benton)
	38	D	6	6	0.56	0.14	0.04	Initial Late Archaic (Benton)
	42	D	7	7	0.35	0.27	0.04	Initial Late Archaic (Benton)
	45	D	7	6	0.22	0.21	0.05	Initial Late Archaic (Benton)
	46	A	6	6	0.34	0.32	0.04	Initial Late Archaic (Benton)
	47	A	6	6	0.33	0.41	0.19	Initial Late Archaic (Benton)
	48	A	6	6	0.36	0.35	0.09	Initial Late Archaic (Benton)
	50	D	7	7	0.70	0.51	0.03	Initial Late Archaic (Benton)
	51	D	7	7	0.33	0.39	0.18	Initial Late Archaic (Benton)
	52	D	7	7	0.33	0.27	0.19	Initial Late Archaic (Benton)
	53	D	7	7	0.20	0.20	0.16	Initial Late Archaic (Benton)
	58	A	8	8	0.65	0.62	0.06	Initial Late Archaic (Benton)
	61	D	8	8	0.83	0.14	0.35	Initial Late Archaic (Benton)
	67	D	8	8	0.64	0.59	0.10	Initial Late Archaic (Benton)
	75	D	9	9	0.41	0.34	0.04	Middle Archaic (Sykes-White Springs)
	77	D	9	9	0.32	0.47	0.04	Middle Archaic (Sykes-White Springs)
	79	D	9	9	0.80	0.50	0.09	Middle Archaic (Sykes-White Springs)
	82	D	10	10 ?	0.29	0.23	0.05	Middle Archaic (Eva-Morrow Mountain)
	83	D	10	10	0.43	0.38	0.04	Middle Archaic (Eva-Morrow Mountain)
	94	D	12-1	11-2	0.20	0.17	0.11	Middle Archaic (Eva-Morrow Mountain)
Hearths	5	A	1	1	0.59	0.31	0.09	Gulf Formational (Wheeler and Alexander)
Pits	4	C	2	0	2.62	1.95	1.16	Probably Natural Phenomenon
	19	D	3	2	0.34	0.34	0.18	Unknown
	24	D	4	3	0.90	0.40	0.32	Unknown

Table 7.10. Site 22IT576. Feature classification and summary data

Feature Type	Feature Number	Block	Level Defined	Level Origin	Length	Width	Depth	Cultural Affiliation Comments
Pits	26	D	5	5	1.31	0.70	0.14	Initial Late Archaic (Benton)
	37	D	5	?	0.20	0.20	0.50	Initial Late Archaic (Benton)
	39	D	6	6 ?	1.66	1.31	0.31	Initial Late Archaic (Benton)
	40	D	6	6	0.22	0.24	0.20	Initial Late Archaic (Benton or Sykes)
	54	A	8-1	8-1	0.19	0.26	0.49	Initial Late Archaic (Benton or Sykes)
	55	A	8	8	0.17	0.19	0.35	Initial Late Archaic (Benton or Sykes)
	62	A	9	9	0.25	0.26	0.14	Initial Late Archaic (Benton or Sykes)
	68	D	8	8	0.12	0.12	0.32	Initial Late Archaic (Benton)
	69	D	8	?	0.16	0.19	0.13	Initial Late Archaic (Benton)
	71	A	8-2	?	2.25	2.00	0.27	Middle Archaic (Sykes-White Springs)
	78	D	9	8	0.76	0.59	0.08	Middle Archaic (Sykes-White Springs)
	80	D	9	?	1.45	1.00	0.98	Middle Archaic (Sykes-White Springs)
	81	D	10	10	0.14	0.15	0.02	Middle Archaic (Sykes-White Springs)
	84	C	10	?	3.00	1.87	0.49	Natural Phenomenon
	85	D	11	10	0.61	0.70	0.24	Middle Archaic (Sykes-White Springs)
	86	D	11-1	11-1	0.42	0.43	0.11	Middle Archaic (Sykes-White Springs)
	87	D	11	10 ?	0.31	0.37	0.10	Middle Archaic (Sykes-White Springs)
	88	D	11-2	11-2	0.45	0.61	0.11	Middle Archaic (Sykes-White Springs)
	90	C	11	11	1.81	1.94	0.81	Middle Archaic (Eva)
	91	D	11	11	0.38	0.37	0.20	Middle Archaic (Sykes-White Springs)
	92	D	11-1	11-1	0.22	0.26	0.11	Middle Archaic (Sykes-White Springs)
	93	D	11-2	11-2	0.20	0.21	0.04	Middle Archaic (Sykes-White Springs)
	95	D	11-2	11-2	0.51	0.49	0.13	Middle Archaic (Sykes-White Springs)
	96	D	11	11	2.32	1.58	0.61	Middle Archaic (Sykes-White Springs)
	97	D	11-2	11-2	0.18	0.18	0.18	Middle Archaic (Sykes-White Springs)
	98	D	11-2	11-2	0.66	0.60	0.13	Middle Archaic (Sykes-White Springs)
	99	D	11-2	11-2	0.18	0.18	0.06	Middle Archaic (Sykes-White Springs)
	100	B	10	9	0.54	0.56	0.27	Middle Archaic (Sykes-White Springs)

Table 7.10. Site 22IT576. Feature classification and summary data

Feature Type	Feature Number	Block	Level Defined	Level Origin	Length	Width	Depth	Cultural Affiliation Comments
Pits	101	B	11	?	0.70	0.84	0.10	Middle Archaic (Sykes-White Springs)
	102	D	12	11-2	0.45	0.76	0.16	Middle Archaic (Sykes-White Springs)
	103	D	12	12	0.65	0.69	0.82	Early Archaic (Kirk)?
	104	D	11-2	11	0.40	0.17	0.07	Middle Archaic (Sykes-White Springs)
	105	D	12	12	0.28	0.25	0.15	Early Archaic (Kirk)?
	106	D	12	11	0.42	0.28	0.16	Middle Archaic (Sykes-White Springs)
	107	D	11-2	11 2	0.20	0.22	0.15	Middle Archaic (Sykes-White Springs)
	108	D	11-2	11	0.26	0.24	0.05	Middle Archaic (Sykes-White Springs)
	110	D	12	12	0.44	0.49	0.22	Early Archaic (Kirk)?
	111	D	12	12	0.62	0.64	0.43	Early Archaic (Kirk)?
	112	D	12	12	0.30	0.25	0.34	Early Archaic (Kirk)?
	114	D	13	12	0.25	0.26	0.06	Early Archaic (Kirk)?
	115	D	13	?	0.68	0.66	0.39	Early Archaic (Kirk)?
	117	D	14	14	0.71	0.59	0.41	Early Archaic (Kirk)?
Prepared Areas	44	D	6	6	4.00	3.09	0.08	Initial Late Archaic (Benton)
	49	A	6	6 ?	2.62	2.65	0.23	Initial Late Archaic (Benton)
Inhumations	Bu2 (F-18)	D	2	2 ?	0.04	0.04	?	Unknown
	Bu3 (F-22)	D	3	3 ?	1.13	1.49	0.15+	Unknown
	Bu4 (F-23)	D	4	4 ?	0.49	0.55	0.73	Unknown
	Bu5 (F-34)	D	6	6 ?	0.81	0.46	0.10	Initial Late Archaic/Middle Archaic (Benton)
	Bu6 (F-30)	D	6	6 ?	0.48	0.60	0.10	Initial Late Archaic/Middle Archaic (Benton)
	Bu7 (F-60)	A	8	?	0.71	0.48	0.08	Initial Late Archaic/Middle Archaic (Benton)
	Bu8 (F-64)	D	8	8 ?	0.68	0.39	0.24	Initial Late Archaic/Middle Archaic (Benton)
	Bu10 (F-72)	D	9	9 ?	0.30	0.11	0.05	Initial Late Archaic/Middle Archaic (Benton)
	Bu11 (F-74)	D	9	9 ?	1.08	0.70	0.27	Initial Late Archaic/Middle Archaic (Benton)
	Bu12 (F-121)	D	17	15 ?	1.78	0.54	0.14	Middle Archaic (Eva)
	Bu16 (F-63)	TP	?	?	1.66	0.50	0.42	Middle Archaic (Eva-Morrow Mountain)

Table 7.10. Site 22IT576. Feature classification and summary data

Feature Type	Feature Number	Block	Level Defined	Level Origin	Length	Width	Depth	Cultural Affiliation Comments
Cremations	F-33 (Bu17)	D	7	7	0.64	0.54	0.21	Initial Late Archaic (Benton)
	F-41 (Bu18)	D	6	6	0.40	0.43	0.05	Initial Late Archaic (Benton)
	F-27 (Bu19)	D	5	2?	0.85	0.5[illegible]	0.34	Unknown
Historic Intrusions	13	D	1-2	1-2	1.20	1.20	0.08	Recent
	20	D	1-2	1-2	0.48	0.8[illegible]	0.67	Recent
	31	D	6	1	6.76	3.34	0.60+	Recent
	70	D	9	1-2	2.40	2.30	1.40+	Recent
Stains	7	B	3	3	0.33	0.48	0.09	

Table 7.10 Site 22IT576. Feature classification and smmary data

Table 7.11. Cultural material from Prepared Area Features: 44 and 49

Feature 44	n
Projectile Point/Knife Distal Fragment	1
Projectile Point/Knife Medial Fragment	1
Projectile Point/Knife Proximal Fragment	1
Uniface 270° Core	1
Utilized Flake ½"	1
Unidentified Chipped Stone Fragments	4
Ground Hematite	1
Non-Utilized Flakes ½"	3
Non-Utilized Flakes ¼"	36
Fire cracked chert	44g
Unmodified cobbles and pebbles	27g
Conglomerate	15g
Hematite	1g
Limonite	1g
Petrified wood	1g
Sandstone	1g
Ferrogenous Sandstone	268g
Saltillo Fabric Marked	1
Alexander Incised	1
Sherdlets	2
Fired Clay	129g
Debris	2g
Charred wood	2g

Table 7.11 (cont)

Feature 49	n
Morrow Mountain	1
Benton Extended Stem	1
Benton Short Stemmed	4
Sykes-White Srpings	1
Projectile point/knife, Distal Fragment	2
Projectile point/knife,Proximal Fragment	3
Projectile point/knife, Medial Fragment	1
Drill, medial fragment	1
Microperforator	1
Uniface cobble scraper	1
Utilized flakes ½"	2
Utilized flakes ¼"	10
Unidentified chipped stone tool	13
Pitted anvilstone	1
Hammerstone	2
Unidentified ground stone tool	2
Non-utilized flakes, ½"	8
Non-utilized flakes, ¼"	77
Fire cracked chert	18g
Unmodified cobbles and pebbles	46g
Conglomerate	325g
Hematite	20g
Petrified wood	
Ferrogenous sandstone	1,849g
Sandstone	1g
Limonite	1g

Table 7.11. (cont)

Feature 49	n
Eroded Sand	2
Sherdlets	
Fired clay	421g
Unmodified Bone	65g
Charred wood	8g
Debris	19
Slag	1g
Cobbles/pebbles	46g

TABLE 7.12. Site 22IT576. Macrobotanical remains in feature samples.

MACROBOTANICAL REMAINS	FEATURES 5	24	26	71	85	98	111	BURIALS 22 (Bu-3)	23 (Bu-4)	74 (Bu-11)
Cane (<u>Arundinaria</u>)					n=6					
Fern Spores				15						
<u>Asteraceae</u>	1?									
Spores	18									
<u>Hypoyix</u> (yellow star-grass)				1						
<u>Phytolaca</u> (pokeweed)				1						
Hickory (<u>Carya</u> spp.)	< 0.1g	0.65g	1.3g	8.05g	27.6g	5.3g		4.7g	3.85g	71.5g
Acron (<u>Quereus</u>)				n=2	0.5g	< 0.1g		< 0.05g	0.05	0.35g
Hickory Involucres or acorn husks		4								
Frag. of Pericarp										2
Penducle	1?									
Curcubitaceae Rind Fragments	11 (poss)									
Fruit Fragments	1									
Hardwwood		0.05g			1.95g	0.55g	2.0g	0.1g		
Ring-porous Hardwood	1.1g	0.15g			1.1g					
Diffuse-porous Hardwood				1						
Oak (Quereus) wood										
Pinewood		0.2g							0.4g	0.15g
Hardwood and Pine Mixture				0.85g						
Hardwood or Modern Residue								0.25g		
Pine and Modern Residue	6.8g							0.1g		
Ring-porous Hard-wood and Pine										1.75g
Bark	0.4g									
Resin								3?		
Indeterminate Wood		< 0.05g				0.1g		0.15g		
Indeterminate Seeds	5	1								2
Indeterminate Seed Fragments	2									
Indeterminate					6	i	2			3

Table 7.13. Site 22It576. Inhumation Analysis

Burial	Position	Side	Facing Direction	Age/Sex	Other
Bu 3				Adult	Analyzed Macrobotanics
Bu 5	Flexed	Lift	North	Elderly female, 40+	
Bu 6	Flexed	Back		Adult	
Bu 7	Flexed	Right	North		
Bu 8				Adult, probable male	
Bu 10				Adult	
Bu 11	Flexed	Right	South	Female 30 $\pm$5	Analyzed Macrobotanics
Bu 12	Extended	Supine	Northwest/south-west	Adult male	Cache of tools
Bu 16	Extended	Supine	North/south	Adult male	Dog burial with human

Table 7.14. Site 22It576. Percentage distribution of cermaic types by temper group and diagnostic (temporal) types.

BLOCK A

(elevation)	level	Shell Tempered	Shell-grog Tempered	Grog Tempered	Bone Tempered	Limestone Tempered	Non-diagnostic Sand Tempered	Diagnostic Sand Tempered	Fiber Tempered	Total per Level	Level Percentages
(81.09-80.9)	1	4.50	0.42	5.77	0.28	6.19	59.63	6.19	17.02	711	53.99
(80.9-80.8)	2	3.89		0.82	0.61	7.77	48.47	4.50	33.95	489	37.13
(80.8-80.7)	3	2.78				5.56	66.67	1.39	23.61	72	5.47
(80.7-80.6)	4	4.76		9.52			38.10	19.05	28.57	21	1.59
(80.6-80.5)	5						54.55		45.45	11	0.84
(80.5-80.4)	6						50.00	16.67	33.33	6	0.46
(80.4-80.3)	7					66.67	33.33			3	0.23
(80.3-80.2)	8						100.00			1	0.08
(80.2-80.1)	9									0	0.00
(80.1-80.0)	10+				33.33		66.67			3	0.23
BLOCK TOTALS		54	3	47	6	88	730	72	317	1317	
		4.10	0.23	3.57	0.46	6.68	55.43	5.47	24.07		100.0%

Table 7.14. (cOnt.)

BLOCK B

(elevation)	level	Shell Tempered	Shell-Grog Tempered	Grog Tempered	Bone Tempered	Limestone Tempered	Non-diagnostic Sand Tempered	Diagnostic Sand Tempered	Fiber Tempered	Total per Level	Level Percentages
(81.06-80.8)	1	1.36	0.85	4.75	0.17	6.79	67.57	2.04	16.47	589	62.26
80.8-80.7	2	0.55		3.87	0.55	3.31	56.91	2.21	32.60	181	19.13
80.7-80.6	3			1.09		6.62	48.91	1.09	42.39	92	9.73
80.6-80.5	4					1.89	47.17	1.89	49.06	53	5.60
80.5-80.4	5					6.67	40.00	6.67	46.67	15	1.59
80.4-80.3	6						33.33	22.22	44.44	9	0.95
80.3-80.2	7						25.00	25.00	50.00	4	0.42
80.2-80.1	8								100.00	1	0.11
80.1-80.0	9								100.00	1	0.11
80.0-79.9	10+						100.00			1	0.11
BLOCK TOTALS		9	5	36	6	50	582	22	236	946	
		0.95	0.53	3.81	0.63	5.29	61.52	2.33	24.95		100.0%

Table 7.14 (cont.)

BLOCK C

(elevation)	level	Shell Tempered	Shell-Grog Tempered	Grog Tempered	Bone Tempered	Limestone Tempered	Non-diagnostic Sand Tempered	Diagnostic Sand Tempered	Fiber Tempered	Total per Level	Level Percentages
80.96-80.7	1	20.09	0.89	14.29	0.45	1.34	43.30	1.79	17.86	224	38.75
80.7-80.6	2	8.26		4.96		6.61	48.76	12.40	19.01	121	20.93
80.6-80.5	3	5.94		8.91		2.97	46.53	6.93	28.71	101	17.47
80.5-80.4	4	6.45	3.23			3.23	35.48	3.23	48.39	31	5.36
80.4-80.3	5	9.30					46.51	11.63	32.56	43	7.44
80.3-80.2	6			3.85			53.85		42.31	26	4.50
80.2-80.1	7	8.33		8.33		8.33	33.33	8.33	33.33	12	2.08
80.1-80.0	8					9.09	45.45	18.18	27.27	11	1.90
80.0-79.9	9						66.67	16.67	16.67	6	1.04
79.9-79.8	10+						66.67		33.33	3	0.52
BLOCK TOTALS		68	3	49	1	17	263	36	141	578	

Table 7.14 (cont.)

BLOCK D

(elevation)	level	Shell Tempered	Shell-Grog Tempered	Grog Tempered	Bone Tempered	Limestone Tempered	Non-diagnostic Sand Tempered	Diagnostic Sand Tempered	Fiber Tempered	Total per Level	Level Percentages
81.23-81.2	1.1	15.44	0.79	16.62	2.41	8.51	43.22	4.97	8.06	2034	15.08
81.2-81.1	1.2	9.32	2.45	13.91	1.57	8.98	42.73	8.61	12.40	3831	28.04
81.1-81.0	1.3	7.49	2.19	11.97	1.27	11.78	41.98	11.05	12.26	3149	23.35
81.0-80.9	2	5.46	2.09	11.14	0.99	8.82	42.54	12.13	16.83	1723	12.77
80.9-80.8	3	7.47	4.75	11.54	0.58	10.77	38.89	13.97	12.03	1031	7.64
80.8-80.7	4	5.12	7.59	13.37	0.33	13.70	35.81	11.39	12.71	606	4.49
80.7-80.6	5	7.47	3.93	16.11	1.96	9.82	36.94	11.98	11.79	509	3.77
80.6-80.5	6	4.78	3.48	13.91	1.74	13.48	39.13	7.39	16.09	230	1.71
80.5-80.4	7	4.68	2.92	9.36	1.17	9.94	45.03	10.53	16.37	171	1.27
80.4-80.3	8	4.17	2.08	13.54	2.08	5.21	39.58	18.75	14.58	96	0.71
80.3-80.2	9	4.00	12.00	12.00		12.00	44.00	4.00	12.00	25	0.19
80.2-80.1	10		18.18	9.09		27.27	36.36		9.09	11	0.08
80.1-78.6	11-25	6.25	6.25	3.13	6.25	12.50	50.00	12.50	3.13	32	0.24
BLOCK TOTALS		1174	352	1788	194	1346	5613	1320	1661	13448	
Percentage		8.73	2.62	13.30	1.44	10.01	41.74	9.82	12.35		

Table 7.16. Site 22IT576, Correlation of actual elevation with excavation block and level.

METERS ABOVE SEA LEVEL ELEVATION	LEVELS IN EXCAVATION BLOCKS			
	BLOCK D	BLOCK A	BLOCK B	BLOCK C
81.23-81.20	1.1A			
81.20-81.10	1.1B, 1.2B			
		(Surf. 81.09)	(Surf. 81.06)	
81.10-81.00	1.2C, 1.3C	1	1	
				(Surf. 80.96)
81.00-80.90	2	1	1	1
80.90-80.80	3	80.90-80.85 2.1 80.85-80.00 2.2	1	1
80.80-80.70	4	3	2	1
80.70-80.60	5	4	3	2
80.60-80.50	6	5	4	3
80.50-80.40	7	6	5	4
80.40-80.30	8	7	6	5
80.30-80.20	9	8	7	6
80.20-80.10	10	9	8	7
80.10-80.00	11	10	9	8
80.00-79.90	12	11	10	9
79.90-79.80	13	12	11	10
79.80-79.70	14	13	12	11
79.70-79.60	15	14	13	12
79.60-79.50	16	15	14	13
79.50-79.40	17	16	15	
79.40-79.30	18	17	16	
79.30-79.20	19	18	17	
79.20-79.10	20	19	18	
79.10-79.00	21	20	19	
79.00-78.90	22	21		
78.90-78.80	23			

Table 7.15. Site 22It576. Block comparison of major ceramic groups.

	Shell Tempered	Shell-Grog Tempered	Grog Tempered	Bone Tempered	Limestone Tempered	Non-diagnostic Sand Tempered	Diagnostic Sand Tempered	Fiber Tempered	Total	Percentage
BLOCK A	4.10	0.23	3.57	0.46	6.68	55.43	5.47	24.07	1317	8.09
BLOCK B	0.95	0.53	3.81	0.63	5.29	61.52	2.23	24.95	946	5.81
BLOCK C	11.76	0.52	8.48	0.17	2.94	45.50	6.23	24.39	578	3.55
BLOCK D	8.73	2.62	13.30	1.44	10.01	41.74	9.82	12.35	13448	82.56
AVERAGE PERCENTAGE	6.39	0.98	7.29	2.70	6.23	51.05	5.94	21.44	16289	100%

Table 7.17. Site 22IT576: Projectile Point/Knife Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Benton Barbed				
WEIGHT	1	1	13.0	-	13.0	13.0	0	-
LENGTH	1	1	47.3	-	47.3	47.3	0	-
WIDTH	1	1	40.9	-	40.9	40.9	0	-
THK	1	1	9.0	-	9.0	9.0	0	-
BASLW	2	0	25.2	2.6	23.3	27.0	3.7	6.8
SHOULDRW	2	0	38.0	2.6	36.2	39.8	3.6	6.5
JUNCW	2	0	24.7	0.1	24.6	24.8	0.2	0.0
HAFTL	2	0	18.9	2.9	16.8	20.9	4.1	8.4
				Benton Extended Stemmed				
WEIGHT	2	9	15.5	2.2	14.0	17.1	3.1	4.8
LENGTH	2	9	77.1	33.5	53.4	100.7	47.3	1118.7
WIDTH	3	8	27.9	5.5	21.8	32.4	10.6	29.7
THK	3	8	10.6	3.0	8.0	13.9	5.9	9.1
BASLW	7	4	21.3	3.7	16.9	26.2	9.3	13.7
SHOULDRW	5	6	29.3	4.8	21.8	35.2	13.4	23.3
JUNCW	8	3	22.1	3.7	14.6	26.3	11.7	13.9
HAFTL	8	3	13.1	1.4	11.5	15.4	3.9	1.9
				Benton Short Stemmed				
WEIGHT	8	35	15.7	2.8	11.8	20.0	8.2	8.0
LENGTH	9	34	62.1	11.1	39.0	76.1	37.1	122.1
WIDTH	18	25	30.4	3.5	24.1	38.1	14.0	11.9
THK	18	25	8.2	1.9	4.1	13.4	9.3	3.6
BASLW	32	11	20.7	2.9	13.8	25.7	11.9	8.5
SHOUDLRW	26	17	30.2	3.9	23.5	39.5	16.0	15.3
JUNCW	37	6	22.2	2.6	15.7	26.5	10.8	6.8
HAFTL	31	12	11.2	1.5	6.9	14.6	7.7	2.3
				Big Sandy				
WEIGHT	0	1	-	-	-	-	-	-
LENGTH	0	1	-	-	-	-	-	-
WIDTH	1	0	25.2	-	25.2	25.2	0	-
THK	0	1	-	-	-	-	-	-
BASLW	0	1	-	-	-	-	-	-
SHOULDRW	1	0	24.5	-	24.5	24.5	0	-
JUNCW	1	0	18.4	-	18.4	18.4	0	-
HAFTL	0	1	-	-	-	-	-	-

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Big Slough				
WEIGHT	1	0	9.2	-	9.2	9.2	0	-
LENGTH	1	0	37.9	-	37.9	37.9	0	-
WIDTH	1	0	29.0	-	29.0	29.0	0	-
THK	1	0	10.0	-	10.0	10.0	0	-
BASLW	1	0	19.1	-	19.1	19.1	0	-
SHOULDRW	1	0	28.3	-	28.3	28.3	0	-
JUNCW	1	0	21.7	-	21.7	21.7	0	-
HAFTL	1	0	12.8	-	12.8	12.8	0	-
				Bradley Spike				
WEIGHT	1	1	3.6	-	3.6	3.6	0	-
LENGTH	1	1	49.8	-	49.8	49.8	0	-
WIDTH	1	1	11.7	-	11.7	11.7	0	-
THK	2	0	8.6	2.5	6.8	10.3	3.5	6.1
BASLW	1	1	5.4	-	5.4	5.4	0	-
SHOULDRW	0	2	-	-	-	-	-	-
JUNCW	0	2	-	-	-	-	-	-
HAFTL	0	2	-	-	-	-	-	-
				Collins				
WEIGHT	1	0	3.0	-	3.0	3.0	0	-
LENGTH	1	0	27.7	-	27.7	27.7	0	-
WIDTH	1	0	17.7	-	17.7	17.7	0	-
THK	1	0	7.6	-	7.6	7.6	0	-
BASLW	1	0	8.8	-	8.8	8.8	0	-
SHOULDRW	1	0	17.5	-	17.5	17.5	0	-
JUNCW	1	0	10.9	-	10.9	10.9	0	-
HAFTL	1	0	9.1	-	9.1	9.1	0	-
				Cotaco Creek				
WEIGHT	2	0	11.1	0.1	11.0	11.2	0.2	0.0
LENGTH	2	0	51.0	1.7	49.8	52.2	2.4	2.9
WIDTH	2	0	32.9	3.8	30.2	35.6	5.4	14.6
THK	2	0	7.5	0.7	7.0	8.0	1.0	0.5
BASLW	1	1	9.6	-	9.6	9.6	0	-
SHOULDRW	2	0	28.6	8.0	22.9	34.2	11.3	63.8
JUNCW	2	0	15.8	1.6	14.7	16.9	2.2	2.4
HAFTL	1	1	10.4	-	10.4	10.4	0	-

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Cypress Creek								
WEIGHT	0	2	-	-	-	-	-	-
LENGTH	1	1	53.0	-	53.0	53.0	0	-
WIDTH	2	0	42.1	2.7	40.2	44.0	3.8	7.2
THK	1	1	9.2	-	9.2	9.2	0	-
BASLW	0	2	-	-	-	-	-	-
SHOULDRW	1	1	43.1	-	43.1	43.1	0	-
JUNCW	2	0	23.9	1.1	23.2	24.7	1.5	1.1
HAFTL	0	2	-	-	-	-	-	-
Dalton								
WEIGHT	0	2	-	-	-	-	-	-
LENGTH	0	2	-	-	-	-	-	-
WIDTH	1	1	21.8	-	21.8	21.8	0	-
THK	2	0	7.6	0.3	7.4	7.8	0.4	0.1
BASLW	2	0	18.0	4.5	14.8	21.2	6.4	20.5
SHOULDRW	0	2	-	-	-	-	-	-
JUNCW	2	0	18.3	1.0	17.6	19.0	1.4	1.0
HAFTL	2	0	10.9	2.9	8.8	12.9	4.1	8.4
Elora								
WEIGHT	1	2	11.1	-	11.1	11.1	0	-
LENGTH	1	2	38.2	-	38.2	38.2	0	-
WIDTH	2	1	28.3	2.1	26.8	29.7	2.9	4.2
THK	3	0	10.9	1.0	10.3	11.9	1.6	1.0
BASLW	2	1	16.4	1.7	15.2	17.6	2.4	2.9
SHOULDRW	2	1	27.7	2.6	25.8	29.5	3.7	6.9
JUNCW	3	0	19.7	1.1	18.6	20.8	2.2	1.2
HAFTL	2	1	13.1	2.6	11.2	14.9	3.7	6.9
Eva								
WEIGHT	5	22	11.3	1.8	8.7	13.2	4.5	3.3
LENGTH	6	21	50.3	9.2	40.2	63.8	23.6	83.8
WIDTH	16	11	34.7	2.7	31.3	40.3	9.0	7.4
THK	16	11	9.8	2.0	7.4	15.1	7.7	4.0
BASLW	18	9	16.9	4.2	7.0	24.0	17.0	17.9
SHOULDRW	15	12	33.7	3.1	28.0	40.0	12.0	9.8
JUNCW	22	5	18.5	3.3	11.4	24.0	12.6	10.9
HAFTL	18	9	6.3	1.9	3.4	10.7	7.3	3.8

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Flint Creek								

WEIGHT	34	80	12.6	10.0	5.9	67.5	21.6	100.5
LENGTH	35	79	51.3	5.8	38.8	60.7	21.9	33.9
WIDTH	80	34	23.5	2.5	19.0	33.7	14.7	6.0
THK	73	41	10.5	1.3	7.4	14.0	6.6	1.7
BASLW	89	25	15.9	2.3	9.6	21.0	11.4	5.1
SHOULDRW	81	33	23.0	2.3	19.0	31.4	12.4	5.2
JUNCW	105	9	15.5	1.6	10.6	19.1	8.5	2.6
HAFTL	90	24	12.4	1.7	8.4	18.2	9.8	2.8
				Flint River Spike				
WEIGHT	1	0	4.5	-	4.5	4.5	0	-
LENGTH	1	0	42.0	-	42.0	42.0	0	-
WIDTH	1	0	13.5	-	13.5	13.5	0	-
THK	1	0	9.6	-	9.6	9.6	0	-
BASLW	0	1	-	-	-	-	-	-
SHOULDRW	0	1	-	-	-	-	-	-
JUNCW	0	1	-	-	-	-	-	-
HAFTL	0	1	-	-	-	-	-	-
				Gary				
WEIGHT	2	1	11.1	2.2	9.5	12.6	3.1	4.8
LENGTH	2	1	56.0	0.1	55.9	56.1	0.2	0.0
WIDTH	2	1	28.5	3.6	25.9	31.0	5.1	13.0
THK	2	1	9.8	1.9	8.4	11.1	2.7	3.7
BASLW	2	1	9.3	1.3	8.3	10.2	1.9	1.8
SHOUDLRW	2	1	27.0	4.3	23.9	30.0	6.1	18.6
JUNCW	2	1	17.3	1.0	16.6	18.0	1.4	1.0
HAFTL	2	1	15.5	0.7	15.0	16.0	1.0	0.5
				Greenbriar				
WEIGHT	1	1	7.9	-	7.9	7.9	0	-
LENGTH	0	2	-	-	-	-	-	-
WIDTH	0	2	-	-	-	-	-	-
THK	1	1	7.7	-	7.7	7.7	0	-
BASLW	0	2	-	-	-	-	-	-
SHOULDRW	2	0	26.0	1.7	24.8	27.2	2.4	2.9
JUNCW	2	0	19.9	2.9	17.8	21.9	4.1	8.4
HAFTL	0	2	-	-	-	-	-	-

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Kirk Corner Notched				
WEIGHT	12	18	8.8	6.2	2.7	24.3	21.6	38.6
LENGTH	12	18	42.8	8.8	27.3	59.4	32.1	77.4
WIDTH	19	11	29.6	6.5	19.8	43.3	23.5	41.8
THK	20	13	8.3	2.8	4.6	14.1	9.5	7.7
BASLW	21	9	23.4	4.5	16.8	33.4	16.6	19.8
SHOULDRW	16	14	28.2	6.6	19.5	42.0	22.5	43.5
JUNCW	24	6	19.4	3.2	14.8	27.8	13.0	10.4
HAFTL	20	10	10.0	2.5	5.7	14.9	9.2	6.5
				Ledbetter/Pickwick				
WEIGHT	2	11	33.6	3.4	31.2	36.0	4.8	11.5
LENGTH	3	10	80.0	28.2	54.0	109.9	55.9	792.6
WIDTH	5	8	36.8	2.3	33.2	39.4	6.2	5.2
THK	6	7	10.6	1.1	9.1	12.2	3.1	1.3
BASLW	12	2	16.2	2.7	11.1	20.2	9.1	7.3
SHOULDRW	6	7	34.8	3.1	30.7	38.2	7.5	9.6
JUNCW	13	0	21.3	3.1	16.5	26.1	9.6	9.5
HAFTL	11	2	12.9	1.6	10.6	15.9	5.3	2.7
				Limestone				
WEIGHT	0	3	-	-	-	-	-	-
LENGTH	0	3	-	-	-	-	-	-
WIDTH	0	3	-	-	-	-	-	-
THK	1	2	11.3	-	11.3	11.3	0	-
BASLW	2	1	16.4	1.8	15.1	17.7	2.6	3.4
SHOULDRW	0	3	-	-	-	-	-	-
JUNCW	2	1	17.8	2.3	16.1	19.4	3.3	5.4
HAFTL	2	1	12.2	0.0	12.2	12.2	0.0	0.0
				Little Bear Creek				
WEIGHT	20	52	14.0	5.2	6.0	26.0	20.0	27.3
LENGTH	22	50	58.0	11.6	32.3	80.5	48.2	133.4
WIDTH	49	23	26.5	3.2	19.1	32.2	13.1	10.2
THK	52	20	10.7	2.0	6.8	15.7	8.9	3.9
BASLW	65	7	13.9	2.8	7.5	19.6	13.1	7.8
SHOUDLRW	55	17	25.7	3.2	18.8	32.0	13.2	10.0
JUNCW	71	1	16.7	2.5	10.6	21.9	11.3	6.1
HAFTL	64	8	12.8	1.8	8.9	18.2	9.3	3.3

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				McIntire				
WEIGHT	3	12	17.1	7.5	10.5	25.3	14.8	56.5
LENGTH	5	10	59.2	5.5	53.5	68.2	14.7	30.3
WIDTH	8	7	36.8	6.4	24.2	45.3	21.1	40.3
THK	9	6	10.4	2.2	7.6	14.5	6.9	4.8
BASLW	13	2	22.5	3.2	17.0	26.6	9.6	10.4
SHOULDRW	9	6	36.3	4.3	31.0	44.0	13.0	18.6
JUNCW	13	2	21.6	4.9	10.4	31.3	20.9	23.6
HAFTL	12	3	13.9	2.9	6.3	17.2	10.9	8.6
			Late Wodland/Mississippian Triangular					
WEIGHT	43	109	1.1	1.5	0.4	11.0	10.6	2.2
LENGTH	44	108	19.5	4.2	11.4	31.1	19.7	17.2
WIDTH	116	36	14.7	2.9	3.7	22.3	18.6	8.3
THK	111	41	4.1	1.3	2.4	13.4	11.0	1.6
BASLW	111	41	14.8	2.1	8.8	22.3	13.5	4.5
SHOULDRW	0	152	-	-	-	-	-	-
JUNCW	0	152	-	-	-	-	-	-
HAFTL	0	152	-	-	-	-	-	-
				Morrow Mountain				
WEIGHT	5	12	12.7	3.9	6.8	17.0	10.2	15.1
LENGTH	8	9	51.2	9.1	35.2	65.1	29.9	82.0
WIDTH	12	5	27.9	4.3	20.6	36.4	15.8	18.7
THK	14	3	9.3	1.4	7.5	12.8	5.3	2.1
BASLW	13	4	15.9	3.9	9.3	21.1	11.8	15.0
SHOULDRW	10	7	28.0	3.7	23.7	34.6	10.9	13.4
JUNCW	14	3	16.7	3.7	7.8	21.1	13.3	14.0
HAFTL	11	6	8.3	3.0	5.2	15.4	10.2	9.0
				Mud Creek				
WEIGHT	1	0	4.4	-	4.4	4.4	0	-
LENGTH	1	0	38.4	-	38.4	38.4	0	-
WIDTH	1	0	19.6	-	19.6	19.6	0	-
THK	1	0	8.5	-	8.5	8.5	0	-
BASLW	1	0	14.9	-	14.9	14.9	0	-
SHOULDRW	1	0	19.4	-	19.4	19.4	0	-
JUNCW	1	0	13.6	-	13.6	13.6	0	-
HAFTL	1	0	14.4	-	14.4	14.4	0	-

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Residual Stemmed				
WEIGHT	13	62	12.3	3.6	7.5	19.0	11.5	12.8
LENGTH	21	54	50.5	9.4	25.5	65.7	40.2	88.1
WIDTH	35	40	26.8	4.6	18.4	37.3	18.9	21.2
THK	42	33	9.9	1.7	6.8	14.5	7.7	3.0
BASLW	48	27	15.4	3.0	9.1	21.5	12.4	9.0
SHOULDRW	32	43	27.5	4.2	20.6	36.5	15.9	17.2
JUNCW	55	20	18.0	2.9	12.1	25.8	13.7	8.1
HAFTL	38	37	11.6	2.2	5.9	17.6	11.7	5.0
				Residual Triangular				
WEIGHT	3	1	10.7	3.1	7.5	13.7	9.2	9.7
LENGTH	3	1	42.4	5.4	36.2	45.8	9.6	29.2
WIDTH	4	0	34.3	8.8	26.7	43.8	17.1	77.3
THK	4	0	8.9	1.5	7.6	10.9	3.3	2.3
BASLW	4	0	33.2	9.8	24.3	43.4	19.1	95.5
SHOULDRW	0	4	-	-	-	-	-	-
JUNCW	0	4	-	-	-	-	-	-
HAFTL	0	4	-	-	-	-	-	-
				Savannah River				
WEIGHT	1	2	15.9	-	15.9	15.9	0	-
LENGTH	2	1	64.9	1.8	63.6	66.2	2.6	3.4
WIDTH	2	1	25.5	1.3	24.6	26.5	1.9	1.8
THK	3	0	10.5	0.7	9.9	11.3	1.4	0.5
BASLW	1	2	15.2	-	15.2	15.2	0	-
SHOULDRW	2	1	25.0	0.7	24.5	25.5	1.0	0.5
JUNCW	3	0	20.5	0.6	20.0	21.1	1.1	0.3
HAFTL	1	2	17.0	-	17.0	17.0	0	-
				Small Unfinished Triangular				
WEIGHT	5	6	2.6	1.4	0.6	4.2	3.6	1.9
LENGTH	5	6	24.8	4.4	19.0	31.0	12.0	18.9
WIDTH	9	2	17.8	1.9	14.4	19.9	5.5	3.5
THK	9	2	6.9	2.2	2.8	10.2	7.4	4.8
BASLW	9	2	16.5	1.8	14.0	19.1	5.1	3.1
SHOULDRW	1	10	17.6	-	17.6	17.6	0	-
JUNCW	1	10	15.4	-	15.4	15.4	0	-
HAFTL	1	10	10.2	-	10.2	10.2	0	-

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Swan Lake				
WEIGHT	1	1	7.0	-	7.0	7.0	0	-
LENGTH	1	1	43.0	-	43.0	43.0	0	-
WIDTH	1	1	17.7	-	17.7	17.7	0	-
THK	2	0	7.8	1.1	7.0	8.6	1.6	1.3
BASLW	1	1	17.2	-	17.2	17.2	0	-
SHOULDRW	1	1	17.2	-	17.2	17.2	0	-
JUNCW	1	1	14.6	-	14.6	14.6	0	-
HAFTL	1	1	9.1	-	9.1	9.1	0	-
				Sykes/White Springs				
WEIGHT	7	24	15.8	6.8	10.3	28.0	17.7	45.9
LENGTH	7	24	51.5	8.2	39.8	67.0	27.2	67.1
WIDTH	20	10	33.0	3.0	28.3	38.2	9.9	8.7
THK	13	17	10.2	2.1	6.3	13.2	6.9	4.2
BASLW	22	8	21.6	4.6	14.6	30.2	15.6	21.5
SHOULDRW	22	8	31.6	3.9	20.6	37.7	17.1	14.9
JUNCW	27	3	23.0	4.6	17.3	33.2	15.9	20.7
HAFTL	22	8	9.7	2.0	7.1	13.5	6.4	3.9
				Tombigbee Stemmed				
WEIGHT	0	1	-	-	-	-	-	-
LENGTH	0	1	-	-	-	-	-	-
WIDTH	1	0	28.0	-	28.0	28.0	0	-
THK	1	0	9.3	-	9.3	9.3	0	-
BASLW	1	0	10.9	-	10.9	10.9	0	-
SHOULDRW	1	0	27.9	-	27.9	27.9	0	-
JUNCW	1	0	17.2	-	17.2	17.2	0	-
HAFTL	1	0	12.6	-	12.6	12.6	0	-
				Vaughn				
WEIGHT	1	3	11.8	-	11.8	11.8	0	-
LENGTH	2	2	47.1	2.6	45.2	48.9	3.7	6.8
WIDTH	3	1	28.6	0.7	27.8	29.1	1.3	0.5
THK	3	1	11.9	0.6	11.5	12.5	1.0	0.3
BASLW	3	1	20.5	2.2	18.3	22.6	4.3	4.6
SHOULDRW	3	1	27.8	0.3	27.6	28.1	0.5	0.1
JUNCW	4	0	22.7	1.4	21.0	24.3	3.3	1.9
HAFTL	3	1	12.8	0.5	12.3	13.3	1.0	0.3

Table 7.18. Site 22IT576. Frequency of Cores by raw material type.

CATEGORY	CAMDEN, HEATED	CAMDEN, UNHEATED	FORT PAYNE	PICKWICK	TUSCALOOSA, HEATED	TUSCALOOSA, UNHEATED	TOTAL
90^{o} Uniface Core	2					2	4
180^{o} Uniface Core, Adjacent	3	1		1		1	6
180^{o} Biface Core, Adjacent	1	2					3
270^{o} Uniface Core	1	3		1			5
270^{o} Biface Core		1					1
360^{o} Uniface Core	1					1	2
360^{o} Biface Core	1		1				2
Bipolar Core	3						3
Microblade Core	2						2
Core/ Other	6	6					12
N=	20	13	1	2		4	40
%	50	32.5	2.5	5		10	100.0

Table 7.19. Site 22IT576: Core Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
90° - Unifacial								
WEIGHT	4	0	99.5	96.8	12.4	204.1	191.7	9363.6
LENGTH	4	0	56.1	19.3	39.0	73.7	34.7	371.4
WIDTH	4	0	39.4	15.8	23.0	54.4	31.4	250.9
THK	4	0	32.7	15.7	16.3	49.8	33.5	247.4
180° - Unifacial Adjacent								
WEIGHT	5	0	60.9	31.4	28.6	94.4	65.8	987.1
LENGTH	5	0	51.3	11.4	37.6	63.1	25.5	129.3
WIDTH	5	0	41.7	7.5	33.8	51.8	18.0	56.9
THK	5	0	30.3	7.4	22.4	38.0	15.6	54.7
180° - Bifacial Adjacent								
WEIGHT	3	0	123.1	27.1	101.3	153.5	52.2	735.8
LENGTH	3	0	64.9	5.1	60.4	70.4	10.0	25.7
WIDTH	3	0	47.7	2.6	45.6	50.6	5.0	6.8
THK	3	0	42.5	0.6	41.8	43.0	1.2	0.4
270° - Unifacial								
WEIGHT	5	0	88.7	41.7	41.8	145.2	103.4	1738.9
LENGTH	5	0	56.3	11.4	43.6	69.2	25.6	130.7
WIDTH	5	0	47.6	6.9	36.3	53.6	17.3	47.1
THK	5	0	34.3	3.7	30.5	38.7	8.2	13.8
270° - Bifacial								
WEIGHT	1	0	92.8	-	92.8	92.8	0	-
LENGTH	1	0	63.0	-	63.0	63.0	0	-
WIDTH	1	0	56.8	-	56.8	56.8	0	-
THK	1	0	30.0	-	30.0	30.0	0	-
360° - Unifacial								
WEIGHT	2	0	11.8	2.1	10.4	13.3	2.9	4.2
LENGTH	2	0	32.0	3.2	29.8	34.3	4.5	10.1
WIDTH	2	0	20.9	2.3	19.3	22.5	3.2	5.1
THK	2	0	16.8	1.1	16.1	17.6	1.5	1.1

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				360° - Bifacial				
WEIGHT	2	0	41.8	52.7	4.5	79.0	74.5	2775.1
LENGTH	2	0	38.2	19.3	24.6	51.9	27.3	372.6
WIDTH	2	0	31.0	11.6	22.8	39.2	16.4	134.5
THK	2	0	24.4	19.6	10.6	38.3	27.7	383.6
				Bipolar Core				
WEIGHT	2	0	7.9	9.0	1.6	14.3	12.7	80.6
LENGTH	2	0	27.1	5.7	23.1	31.2	8.1	32.8
WIDTH	2	0	18.8	10.5	11.4	26.2	14.8	109.5
THK	2	0	14.1	11.6	5.9	22.3	16.4	134.5
				Microblade Core				
WEIGHT	2	0	6.4	2.3	4.8	8.0	3.2	5.1
LENGTH	2	0	22.3	3.0	20.2	24.4	4.2	8.8
WIDTH	2	0	22.0	3.4	19.6	24.4	4.8	11.5
THK	2	0	16.8	1.9	15.5	18.2	2.7	3.6
				Core - Other				
WEIGHT	12	0	74.9	50.2	2.2	155.5	153.3	2516.7
LENGTH	12	0	55.0	15.4	17.2	71.3	54.1	237.2
WIDTH	12	0	40.5	10.7	13.5	49.5	36.0	115.2
THK	12	0	29.4	9.3	11.0	44.5	33.5	85.9

7.20. Site 22IT576. Frequency of Preforms by raw material type.

CATEGORY	CAMDEN, HEATED	CAMDEN, UNHEATED	FORT PAYNE	PICKWICK	TUSCALOOSA, HEATED	TUSCALOOSA UNHEATED	UNIDENT	TOTAL
Preform I on Cobble	10					2		12
Preform I on Flake	17	7						24
Preform I on Indeterminate	37	3	1					41
Preform II on Cobble	4							4
Preform II on Flake	34	5	1	1	2			43
Preform II on Indeterminate	62	2	2				2	68
N=	164	17	4	1	2	2	2	192
%	85.4	8.9	2.1	0.5	1	1	1	100.0

Table 7.21. Site 22IT576: Preform Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Preform 1 - Cobble								
WEIGHT	4	0	43.3	35.2	11.7	91.3	79.6	1237.4
LENGTH	4	0	54.7	17.4	37.3	78.0	40.7	302.8
WIDTH	4	0	39.2	7.8	30.6	46.8	16.2	61.4
THK	4	0	22.5	5.8	15.6	27.9	12.3	33.3
Preform 1 - Flake								
WEIGHT	7	1	17.8	9.3	7.3	30.0	22.7	87.2
LENGTH	7	1	41.0	10.1	28.0	55.9	27.9	101.2
WIDTH	8	0	30.7	6.0	21.0	38.8	17.8	35.9
THK	8	0	14.0	5.7	8.6	23.7	15.1	32.5
Preform 1 - Indeterminate								
WEIGHT	21	3	29.2	18.2	9.3	80.3	71.0	330.1
LENGTH	22	2	49.0	11.8	32.0	80.1	48.1	139.9
WIDTH	24	0	35.7	9.1	21.8	59.6	37.8	82.9
THK	24	0	20.8	5.6	13.2	33.2	20.0	31.1
Preform 2 - Cobble								
WEIGHT	2	1	41.3	15.4	30.4	52.2	21.8	237.6
LENGTH	3	0	59.6	5.3	53.5	63.1	9.6	28.1
WIDTH	3	0	42.2	9.9	33.0	52.6	19.6	97.1
THK	3	0	22.6	4.2	17.8	25.4	7.6	17.4
Preform 2 - Flake								
WEIGHT	12	3	15.6	8.2	4.2	27.8	23.6	66.7
LENGTH	12	3	47.4	10.2	32.1	60.7	28.6	103.2
WIDTH	14	1	28.8	7.0	19.4	39.5	20.1	49.1
THK	14	1	11.9	2.8	8.0	16.9	8.9	7.9
Preform 2 - Indeterminate								
WEIGHT	12	5	27.7	28.0	2.8	90.3	87.5	781.4
LENGTH	12	5	49.9	18.6	26.3	92.5	66.2	345.6
WIDTH	14	3	31.5	10.0	16.6	52.0	35.4	100.0
THK	17	0	15.1	5.9	6.3	27.0	20.7	35.0

CATEGORY	BANGOR, FOSSIL.	CAMDEN, HEATED	CAMDEN, UNHEATED	FT. PAYNE	TUSCA., HEATED	QUARTZITE, TALLAHATTA	UNIDENT.	TOTAL
Ovoid Biface Blade - Flake		3	3					6
Ovoid Biface Blade-Other	1	3						4
Triangular Biface Blade-Flake		11	1	1	1			14
Triangular Biface Blade-Other		18	1	2		2		23
Narrow Triangular Biface Blade-Flake		2						2
Narrow Triangular Biface Blade-Other		4	1	3		1		9
Expanding Triangular Biface Blade-Flake			2					2
Broad Based Triangular Biface Blade-Other			2					2
Fragments		115	13	22	7	1	1	159
Biface-Other		2	1					3
Rehafted Biface Blade Fragment		3	1	3				7
Quarry Blades				5				
N=	1	161	25	36	8	4	1	238
%	0.42	67.65	10.50	15.13	3.36	1.68	0.42	100.00

Table 7.22. Site 22IT576. Frequency of biface blades and quarry blades by raw material type.

Table 7.23. Site 22IT576: Biface and Quarry Blade Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Ovoid Biface Blade - Flake								
WEIGHT	6	0	14.1	10.3	2.7	31.2	28.5	105.2
LENGTH	6	0	51.2	15.0	31.0	75.5	44.5	226.4
WIDTH	6	0	31.9	7.8	19.3	40.7	71.4	61.0
THK	6	0	9.9	2.4	6.5	13.6	7.1	8.2
Ovoid Biface Blade - Other								
WEIGHT	2	1	15.4	12.2	6.8	24.1	17.3	149.6
LENGTH	2	1	48.1	12.5	39.3	57.0	17.7	156.6
WIDTH	3	0	31.2	8.4	22.5	39.3	16.8	70.8
THK	3	0	11.6	2.6	8.7	13.7	5.0	6.7
Triangular Biface Blade - Flake								
WEIGHT	6	5	13.0	6.3	5.6	22.2	16.6	39.1
LENGTH	8	3	53.0	7.4	40.0	63.5	23.5	54.1
WIDTH	9	2	28.2	8.3	13.2	42.3	29.1	69.2
THK	11	0	9.9	2.3	5.3	13.5	8.2	5.4
Triangular Biface Blade - Other								
WEIGHT	8	5	14.0	6.6	4.6	25.8	21.2	43.3
LENGTH	9	4	50.4	8.9	42.4	69.2	26.8	78.7
WIDTH	11	2	30.1	3.8	26.2	39.8	13.6	14.7
THK	12	1	12.0	3.2	9.1	20.5	11.4	10.0
Narrow Triangular Biface Blade - Flake								
WEIGHT	2	0	23.4	6.3	19.0	27.9	8.9	39.6
LENGTH	2	0	65.1	5.7	61.1	69.2	8.1	32.8
WIDTH	2	0	28.3	1.3	27.4	29.3	1.9	1.8
THK	2	0	13.1	1.6	12.0	14.2	2.2	2.4

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
			Narrow Triangular Biface Blade - Other					
WEIGHT	4	1	15.1	6.1	9.4	22.6	13.2	36.9
LENGTH	4	1	81.1	50.8	41.6	154.9	113.3	2578.7
WIDTH	5	0	21.0	1.5	19.3	22.8	3.5	2.2
THK	4	1	10.4	1.9	8.4	12.4	4.0	3.5
			Quarry Blade					
WEIGHT	5	0	48.2	14.3	25.4	61.4	36.0	204.0
LENGTH	5	0	104.0	11.2	86.3	114.5	28.2	126.3
WIDTH	5	0	44.6	3.9	38.2	47.9	9.7	15.4
THK	5	0	10.8	1.6	8.3	12.6	4.3	2.6

Table 7.24. Site 22IT576. Frequency of Scrapers by raw material type.

CATEGORY	BANGOR, FOSS	CAMDEN, HEATED	CAMDEN, UNHEATED	FORT PAYNE	PICKWICK	TUSCALOOS HEATED	TUSCALOOS UNHEATED	CONGLOMER	QUARTZITE, TALLAHA	UNIDENT	TOTAL
Uniface Side Scraper-blade/ Blade-like Flake		5									5
Uniface End Scraper-blade/ Blade-like Flake		2									2
Uniface Side-end Scraper Blade/ Blade-like Flake		1	1							1	3
Uniface Side Scraper-Expanding Flake		18				2					20
Uniface End Scraper-Expanding Flake		16	3	1						1	21
Uniface Side-End Scraper-Expanding Flake		7	1								8
Uniface Side Scraper-Other Flake		21	3	2		2					28
Uniface End Scraper-Other Flake	1	13	1		1	1					17
Uniface Side-End Scraper-Other Flake		19					1				20
Uniface Side Scraper-Thermal Spall		1									1
Biface Hafted End Scraper		1									1

Table 7.24. Site 22IT576. Frequency of Scrapers by raw material type. (continued)

CATEGORY	BANGOR, FOSSIL.	CAMDEN, HEATED	CAMDEN, UNHEATED	FORT PAYNE	PICKWICK	TUSCALOOSA, HEATED	TUSCALOOSA, UNHEATED	CONGLOMERATE	QUARTZITE, TALLAHATTA	UNIDENTIFIED	TOTAL
Uniface Cobble Scraper							3				3
Scraper-Biface Fragment (Rec.)		14		1							15
Scraper-Core (Rec.)		2	1								3
Notched Flake/Spokeshave		7	2	1		1	1	1			13
Sraper Fragment		12	1			1					14
Scraper-Other		1									1
Biface Scraper-Flake		6			1						7
Uniface Hafted End Scraper		1									1
Spokeshave/Biface Side Scraper		2									2
Notched Flake/Spokeshave (Rec.)		1									1
Hafted End Scraepr (Rec.)		7		2					1		10
N=	1	157	13	7	2	7	5	1	1	2	198
%	0.51	79.29	6.56	3.53	1.01	3.53	2.52	0.51	0.51	1.01	100.00

Table 7.25. Site 22IT576: Scraper Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Uniface Side Scraper on Blade/Blade-Like Flake								
WEIGHT	5	0	99.6	6.0	1.2	17.6	16.4	32.7
LENGTH	5	0	44.0	10.5	30.4	57.0	26.6	110.1
WIDTH	5	0	26.9	11.6	14.5	43.0	28.5	133.8
THK	5	0	9.9	4.2	4.2	15.8	11.6	17.3
Uniface End Scraper on Blade/Blade-Like Flake								
WEIGHT	1	0	3.3	-	3.3	3.3	0	-
LENGTH	1	0	31.7	-	31.7	31.7	0	-
WIDTH	1	0	22.9	-	22.9	22.9	0	-
THK	1	0	7.3	-	7.3	7.3	0	-
Uniface Side-End Scraper on Blade/Blade-Like Flake								
WEIGHT	2	0	2.8	0.1	2.7	2.9	0.2	0.0
LENGTH	2	0	20.2	2.8	18.3	22.2	3.9	7.6
WIDTH	2	0	23.1	4.0	20.3	26.0	5.7	16.2
THK	2	0	5.3	0.4	5.0	5.5	0.5	0.1
Uniface Side Scraper on Expanding Flake								
WEIGHT	16	0	8.1	17.3	0.6	72.2	71.6	297.8
LENGTH	16	0	28.8	12.6	14.8	66.0	51.2	158.5
WIDTH	16	0	26.9	10.6	12.3	53.3	41.0	113.1
THK	16	0	9.1	8.7	2.8	38.1	35.3	75.9
Uniface End Scraper on Expanding Flake								
WEIGHT	19	0	3.9	2.9	2.4	9.6	9.2	8.6
LENGTH	19	0	25.2	8.7	5.7	39.0	29.3	76.0
WIDTH	19	0	24.1	8.4	5.7	35.8	30.1	70.7
THK	19	0	6.2	2.2	2.6	11.0	8.4	4.9
Uniface Side-End Scraper on Expanding Flake								
WEIGHT	7	0	7.4	4.2	2.7	12.3	9.6	17.4
LENGHT	7	0	33.8	12.0	22.5	56.2	33.7	143.7
WIDTH	7	0	28.7	7.6	22.0	42.7	20.7	57.2
THK	7	0	8.0	2.0	5.9	12.2	6.3	4.0

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Uniface Side Scraper on Other Flake								
WEIGHT	21	0	4.6	6.5	0.3	30.2	29.9	42.5
LENGTH	21	0	27.6	11.6	11.4	61.0	49.6	134.2
WIDTH	21	0	21.6	6.3	11.0	34.2	23.2	39.2
THK	21	0	6.7	4.5	3.1	21.8	18.7	20.7
Uniface End Scraper on Other Flake								
WEIGHT	16	0	6.8	6.2	2.0	21.3	20.3	38.1
LENGTH	16	0	28.2	13.0	12.1	51.9	39.8	169.6
WIDTH	16	0	26.6	9.2	16.6	49.0	32.4	84.1
THK	16	0	8.3	3.9	3.6	17.0	13.4	15.2
Uniface Side-End Scraper on Other Flake								
WEIGHT	14	0	5.3	5.6	0.8	23.2	22.4	31.1
LENGTH	14	0	24.0	11.6	9.5	54.3	44.8	133.6
WIDTH	14	0	24.7	6.8	14.0	37.5	23.5	46.4
THK	14	0	7.1	3.3	4.0	14.5	10.5	10.7
Biface Hafted End Scraper								
WEIGHT	6	0	7.9	3.8	3.4	13.3	9.9	14.3
LENGTH	6	0	35.2	10.6	19.7	50.9	31.2	112.0
WIDTH	6	0	25.0	3.5	20.0	29.6	9.6	12.4
THK	6	0	8.8	2.0	6.4	11.5	5.1	3.8
Uniface Cobble Scraper								
WEIGHT	3	0	59.2	50.7	2.3	99.4	97.1	2567.9
LENGTH	3	0	43.1	21.3	19.0	59.4	40.4	463.7
WIDTH	3	0	40.2	23.2	13.6	56.4	42.8	540.1
THK	3	0	22.8	13.6	8.5	35.6	27.1	185.1
Scraper on Biface Fragment (Recycled)								
WEIGHT	11	0	11.0	8.2	1.9	29.6	27.7	67.6
LENGTH	11	0	36.4	11.4	18.4	52.4	34.0	130.6
WIDTH	11	0	24.7	6.7	13.2	38.7	25.5	45.1
THK	11	0	12.2	4.8	7.3	24.3	17.0	23.4

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
			Scraper on Core (Recycled)					
WEIGHT	2	0	129.0	170.8	8.3	249.8	241.5	29161.1
LENGTH	2	0	54.6	44.0	23.5	85.7	62.2	1934.4
WIDTH	2	0	45.4	32.6	22.4	68.5	46.1	1062.6
THK	2	0	31.8	22.2	16.1	47.5	31.4	493.0
			Notched Flake/Spokeshave					
WEIGHT	14	0	9.0	18.0	0.6	70.7	70.1	323.4
LENGTH	14	0	31.3	11.8	19.0	62.5	47.5	138.3
WIDTH	14	0	25.6	9.9	14.2	47.3	33.1	97.8
THK	14	0	8.0	5.4	2.5	24.2	71.7	29.3
			Scraper Other					
WEIGHT	1	0	3.3	-	3.3	3.3	0	-
LENGTH	1	0	23.0	-	23.0	23.0	0	-
WIDTH	1	0	24.0	-	24.0	24.0	0	-
THK	1	0	6.0	-	6.0	6.0	0	-
			Biface Scraper on Flake					
WEIGHT	6	0	9.2	7.4	1.9	21.4	19.5	55.3
LENGTH	6	0	36.4	9.7	26.0	49.5	23.5	93.3
WIDTH	6	0	27.7	13.1	15.2	53.0	37.8	172.3
THK	6	0	7.8	2.8	4.4	11.7	7.3	7.7
			Unfiace Hafted End Scraper					
WEIGHT	2	0	8.1	3.2	5.9	10.4	4.5	10.1
LENGTH	2	0	33.0	1.7	31.8	34.2	2.4	2.9
WIDHT	2	0	30.6	11.2	22.7	38.5	15.8	124.8
THK	2	0	7.6	0.0	7.6	7.6	0.0	0.0

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Spokeshave/Biface Side Scraper								
WEIGHT	1	0	15.4	-	15.4	15.4	0	-
LENGTH	1	0	43.3	-	43.3	43.3	0	-
WIDTH	1	0	40.0	-	40.0	40.0	0	-
THK	1	0	8.6	-	8.6	8.6	0	-
Hafted End Scraper (Recycled)								
WEIGHT	3	0	13.0	6.6	5.5	17.5	12.0	43.1
LENGTH	3	0	46.6	18.5	27.5	64.5	37.0	343.3
WIDTH	3	0	28.4	5.9	24.7	35.2	10.5	34.5
THK	3	0	11.5	3.3	4.2	15.2	6.0	10.6

CATEGORY	BANGOR, BLUE-GREEN	CAMDEN, HEATED	CAMDEN, UNHEATED	FORT PAYNE	FORT PAYNE, FOSSIL.	PICKWICK	TUSCALOOSA, HEATED	TUSCALOOSA, UNHEATE	OTHER CHERT (WHITE)	NOVACULITE	QUARTZ	QUARTZITE	QUARTZITE, TALLAHAT	UNIDENTIFIED	TOTAL
Shaft Drill		9	1	7			1	1							19
Expanding Base Drill	1	22	3	9		1	1								37
Stemmed Drill (Rec.)		28	4	11			1			1			1		46
Drill Fragment		80	13	49	1	2	3	1		1		1	4	2	157
Reamer		3													3
Perforator		17		6											23
Graver		8	1	2			1								12
Microlith		18		2		1			1						22
Denticulate		2	1												3
Micro Perforator		11		6							1				18
Reamer (Rec.)		2													2
Perforator (Rec.)		6		3											9
N=	1	206	22	95	1	4	7	2	1	2	1	1	5	2	351
%	0.28	58.69	6.27	27.06	0.28	1.13	1.99	0.57	0.28	0.57	0.28	0.28	1.42	0.57	100.00

Table 7.26. Site 22IT576. Frequency of drills, perforators, etc. by raw material type.

Table 7.27. Site 22IT576: Drills, Perforators, Etc. Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Shaft Drill				
WEIGHT	8	3	4.0	0.9	3.0	5.5	2.5	0.8
LENGTH	8	3	39.7	15.2	4.5	55.5	51.0	230.5
WIDTH	11	0	11.9	2.1	4.4	16.4	7.0	4.6
THK	10	1	7.9	1.4	5.9	9.7	3.8	2.0
				Expanding Base Drill				
WEIGHT	12	19	5.7	2.1	3.5	10.1	6.6	4.5
LENGTH	12	19	48.6	10.4	35.4	73.8	38.4	108.6
WIDTH	31	0	18.1	5.6	2.0	31.7	29.7	31.3
THK	22	9	9.1	2.7	3.3	16.6	13.3	7.4
				Stemmed Drill (Recycled)				
WEIGHT	11	28	6.7	1.9	4.1	10.1	6.0	3.5
LENGTH	11	28	48.2	9.8	31.5	62.9	31.4	95.1
WIDTH	39	0	22.4	5.1	2.1	34.3	32.2	25.6
THK	24	15	9.2	1.6	6.7	12.0	5.3	2.7
				Reamer				
WEIGHT	2	1	1.0	0.1	1.0	1.1	0.1	0.0
LENGTH	2	1	24.1	0.2	24.0	24.3	0.3	0.0
WIDTH	3	0	12.0	11.0	1.6	23.5	21.9	120.9
THK	3	0	6.4	2.9	4.0	9.6	5.6	8.3
				Perforator				
WEIGHT	18	1	2.6	2.1	0.6	8.3	7.7	4.4
LENGTH	18	1	25.5	9.0	2.0	40.4	38.4	80.7
WIDTH	19	0	17.3	6.6	1.4	35.4	34.0	43.2
THK	19	0	5.7	1.8	2.6	8.9	6.3	3.2
				Graver				
WEIGHT	12	0	4.2	2.5	1.0	7.9	6.9	6.1
LENGTH	12	0	22.7	8.9	4.4	34.0	29.6	79.3
WIDTH	12	0	21.7	10.0	11.5	43.8	32.3	99.9
THK	12	0	6.0	3.4	2.4	14.2	11.8	11.5

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Microlith				
WEIGHT	16	2	1.2	1.4	0.3	6.0	5.7	1.8
LENGTH	16	2	17.4	6.9	3.8	31.6	27.8	47.2
WIDTH	18	0	9.3	2.9	2.8	16.5	13.7	8.3
THK	17	1	3.8	1.5	1.7	6.9	5.2	2.3
				Denticulate				
WEIGHT	3	0	5.5	4.1	1.3	9.5	8.2	16.8
LENGTH	3	0	33.8	15.1	21.2	50.6	29.4	228.9
WIDTH	3	0	23.1	10.1	13.0	33.2	20.2	102.0
THK	3	0	8.9	4.8	4.3	13.9	9.6	23.2
				Microperforator				
WEIGHT	16	0	0.4	0.2	0.1	0.8	0.7	0.1
LENGTH	16	0	14.3	4.5	4.3	25.0	20.7	20.6
WIDTH	16	0	10.3	3.5	1.8	17.8	16.0	12.4
THK	16	0	2.9	1.1	1.5	5.4	3.9	1.1
				Reamer (Recycled)				
WEIGHT	2	0	7.1	3.7	4.5	9.7	5.2	13.5
LENGTH	2	0	18.3	18.5	5.2	31.4	26.2	343.2
WIDTH	2	0	23.7	2.6	21.9	25.6	3.7	6.8
THK	2	0	9.0	0.7	8.5	9.5	1.0	0.5
				Perforator (Recycled)				
WEIGHT	7	2	8.9	2.8	3.2	11.8	8.6	7.9
LENGTH	7	2	39.6	5.4	33.4	46.6	13.2	28.8
WIDTH	9	0	25.0	5.1	11.7	30.8	17.1	25.6
THK	9	0	8.9	1.9	6.4	11.6	5.2	3.7

CATEGORY	BANGOR, BLUE-GREEN	BANGOR, FOSSIL.	CAMDEN, HEATED	CAMDEN, UNHEATED	FORT PAYNE	FORT PAYNE, FOSSIL.	GREY BUFFALO RIVER	PICKWICK	TUSCALOOSA, HEATED	TUSCALOOSA, UNHEATED	CONGLOMERATE	HEMATITE	NOVACULITE	QUARTZ	QUARTZITE	QUARTZITE, TALLAHATTA	Fe Ss	UNIDENTIFIED	TOTAL
Uniface Chopper			2							1							1		4
Biface Chopper			13	1						4	1						2		21
Uniface Adze										1									1
Biface Adze			3	1				1		1	2								8
Uniface Flake Knife			7	3	1				1										12
Biface Flake Knife			17	1	5														23
Biface Cobble Knife			2																2
Biface Digging Tool											2						11		13
Unidentified Chipped Stone Frag.	3	5	2022	100	444	16	1	10	67	18	10	2	3	2	4	10	29	26	2772
Other			8														1		9
Wedge			4		4				1	3									12
Chipped Axe																	2		2
Chopper/Hammerstone				2						1	1								4
Chisel			1																1
Burinated Biface (Rec.)			1																1
Adze/Chisel										1									1
Piece Esquille			2						1										3
N	3	5	2082	108	454	16	1	11	70	30	16	2	3	2	4	10	46	26	2889
%	0.10	0.17	72.07	3.74	15.71	0.55	0.03	0.38	2.42	1.04	0.55	0.06	0.10	0.06	0.14	0.35	1.59	0.90	100.00

Table 7.28. Site 22IT576. Frequency of other uniface and biface tools by raw material type.

Table 7.29. Site 22IT576: Other Uniface and Biface Tool Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
			Uniface Chopper					
WEIGHT	4	0	230.9	258.7	94.4	618.8	524.4	
LENGTH	4	0	80.4	26.9	60.8	119.5	58.7	
WIDTH	4	0	65.8	31.9	43.0	113.0	70.0	
THK	4	0	30.4	3.2	27.4	33.7	6.3	
			Biface Chopper					
WEIGHT	16	0	225.0	248.4	33.6	1045.7	1012.1	
LENGTH	16	0	76.3	30.5	31.6	165.0	133.4	
WIDTH	16	0	60.8	17.7	32.4	102.6	70.2	
THK	16	0	37.3	12.1	21.0	60.8	39.8	
			Biface Adze					
WEIGHT	3	0	42.1	32.1	21.5	79.1	57.6	
LENGTH	3	0	56.1	13.9	45.5	71.8	76.3	
WIDTH	3	0	32.7	4.1	28.8	37.0	8.2	
THK	3	0	19.7	8.5	14.2	29.5	15.3	
			Uniface Flake Knife					
WEIGHT	11	0	11.0	11.2	2.5	42.8	40.3	
LENGTH	11	0	50.9	11.5	32.7	66.2	33.5	
WIDTH	11	0	29.9	7.3	19.4	40.0	20.6	
THK	11	0	8.2	5.2	3.6	22.0	18.4	
			Biface Flake Knife					
WEIGHT	18	0	13.3	8.1	2.6	31.6	29.0	
LENGTH	18	0	45.3	12.2	20.2	67.4	47.2	
WIDTH	18	0	32.6	10.1	20.5	56.0	35.5	
THK	18	0	9.3	2.9	4.5	15.3	10.8	
			Biface Cobble Knife					
WEIGHT	2	0	32.5	3.5	30.1	35.0	4.9	
LENGTH	2	0	48.7	15.7	37.6	59.8	22.2	
WIDTH	2	0	37.3	9.1	30.9	43.7	12.8	
THK	2	0	22.3	3.2	20.0	24.5	4.5	

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
			Biface Digging Implement					
WEIGHT	5	0	192.1	109.6	57.6	319.8	262.2	
LENGTH	5	0	79.3	16.3	57.6	95.5	37.9	
WIDTH	5	0	63.1	23.8	27.2	81.6	54.4	
THK	5	0	30.5	5.9	22.0	36.3	14.3	
			Other					
WEIGHT	1	5	11.7	-	11.7	11.7	0	-
LENGTH	2	4	47.5	6.2	43.2	51.9	8.7	
WIDTH	3	3	23.9	3.7	19.8	27.1	7.3	
THK	6	0	10.5	1.4	8.8	12.4	3.6	
			Wedge					
WEIGHT	9	0	19.7	15.7	4.7	53.9	49.2	
LENGTH	8	1	38.4	12.6	23.8	64.5	40.7	
WIDTH	9	0	31.0	5.4	24.0	39.4	15.4	
THK	9	0	14.2	4.7	7.2	19.4	12.2	
			Chopper/Hammerstone					
WEIGHT	4	0	117.6	63.5	43.6	181.1	137.5	
LENGTH	4	0	59.8	13.0	44.0	74.0	30.0	
WIDTH	4	0	54.8	12.1	38.8	67.8	29.0	
THK	4	0	30.7	8.2	23.4	39.3	15.9	
			Chisel					
WEIGHT	1	0	3.5	-	3.5	3.5	0	-
LENGTH	1	0	27.0	-	27.0	27.0	0	-
WIDTH	1	0	19.3	-	19.3	19.3	0	-
THK	1	0	8.5	-	8.5	8.5	0	-
			Adze/Chisel					
WEIGHT	1	0	44.9	-	44.9	44.9	0	-
LENGTH	1	0	57.4	-	57.4	57.4	0	-
WIDTH	1	0	39.5	-	39.5	39.5	0	-
THK	1	0	30.6	-	30.6	30.6	0	-

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
			Splintered Wedge (Piece Esquille)					
WEIGHT	3	0	3.5	0.6	2.9	4.1	1.2	
LENGTH	3	0	27.2	3.1	25.3	30.8	5.5	
WIDTH	3	0	16.7	1.6	14.8	17.6	2.8	
THK	3	0	7.6	1.2	6.3	8.6	2.3	

Table 7.30. Site 22IT576. Total of utilized flakes and chert chunks by excavation block

BLOCK	1.0 inch	0.5 inch	0.25 inch	Chert Chunk	TOTAL
Block A	5	168	227	6	406
Block B	7	190	169	12	378
Block C	4	114	96	14	228
Block D	39	1594	2525	154	4312
TOTAL	55	2066	3017	186	5324

Table 7.31. Site 22IT576. Utilized flakes as percentages of non-utilized flakes

BLOCK	1.0 inch	0.5 inch	0.25 inch
Block A	17.86*	16.34	3.60
Block B	29.17	20.02	2.87
Block C	18.18	20.47	3.18
Block D	25.35	23.55	3.83

* 17.86% of all 1.0 inch flakes in Block A were utilized.

Table 7.32. Site 22IT576. Block A: Nonutilized debitage by size and raw material.

	1.0-Inch		0.5-Inch		0.25-Inch		Blades/ Blade-like Flakes	
	n	%	n	%	n	%	n	%
Bangor, Blue-green					1	.02		
Bangor, Fossil.					6	.10		
Camden, Heated	6	21	641	62.4	4372	69.41		
Camden, Unheated	3	11	97	9.4	416	6.60		
Chalcedony					2	.03		
Fort Payne			55	5.4	699	11.08		
Fort Payne, Fossil.					7	.11		
Novaculite					1	.02		
Oolitic					1	.02		
Pickwick			2	.2	17	.27		
Tuscaloosa, Heated			12	1.2	154	2.44		
Tuscaloosa, Unheated	3	11	24	2.3	103	1.64		
Conglomerate	2	7	35	3.4	88	1.40		
Limonite			1	.1				
Quartz					1	.02		
Quartzite			3	.3	7	.11		
Quartzite, Tallahatta			1	.1	18	.29		
Sandstone			2	.2	5	.08		
Sandstone, Ferr.	14	50	152	14.8	339	5.38		
Siltstone			1	.1				
Unidentified			2	.2	62	.98	1	100.
TOTALS	28	100.00	1028	100.00	6299	100.00	1	100.

Table 7.33. Site 22IT576. Block B: Nonutilized debitage by size and raw material.

	1.0-Inch		0.5-Inch		0.25-Inch	
	n	%	n	%	n	%
Bangor, Blue-green					3	.05
Bangor, Fossil.					8	.14
Camden, Heated	7	29.17	681	71.76	4573	77.63
Camden, Unheated	4	16.67	72	7.59	308	5.23
Chalcedony					1	.02
Fort Payne			43	4.53	415	7.04
Fort Payne, Fossil.			1	.11	9	.15
Novaculite					3	.05
Pickwick			1	.11	8	.14
Tuscaloosa, Heated	1	4.17	9	.95	83	1.41
Tuscaloosa, Unheated	3	12.50	23	2.42	114	1.94
Conglomerate	3	12.50	30	3.16	40	.68
Hematite					1	.02
Quartzite					3	.05
Quartzite, Tallahatta					11	.19
Sandstone			5	.53	12	.20
Sandstone, Ferr.	6	25.00	81	8.54	256	4.35
Siltstone					1	.02
Unidentified			3	.32	42	.71
TOTALS	24	100.00	949	100.00	5891	100.00

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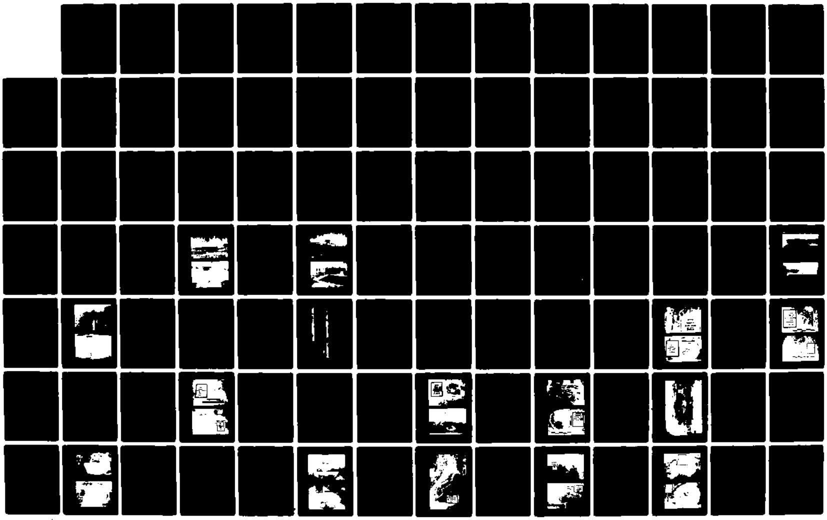

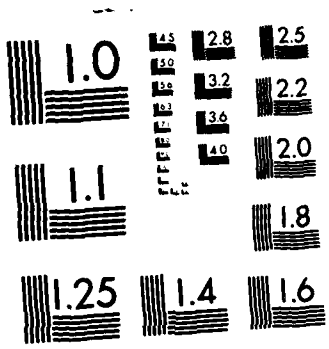

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Table 7.34. Site 22IT576. Block C: Nonutilized debitage by size and raw material

	1.0-Inch		0.5-Inch		0.25-Inch		Blades/ Blade-like Flakes	
	n	%	n	%	n	%	n	%
Bangor, Blue-green					1	.03		
Bangor, Fossil.					7	.23		
Camden, Heated	2	9.09	346	62.12	2084	69.10	1	100.
Camden, Unheated	5	22.73	60	10.77	210	6.96		
Fort Payne	1	4.55	14	2.51	258	8.55		
Fort Payne, Fossil.			1	.18	4	.13		
Pickwick			2	.36	8	.27		
Tuscaloosa, Heated			6	1.08	50	1.66		
Tuscaloosa, Unheated	2	9.09	17	3.05	74	2.45		
Conglomerate			15	2.69	48	1.59		
Hematite					1	.03		
Quartzite					8	.27		
Quartzite, Tallahatta					12	.40		
Sandstone			5	.90	3	.10		
Sandstone, Ferr.	12	54.55	88	15.80	211	7.00		
Unidentified			3	.54	37	1.23		
TOTALS	22	100.00	557	100.00	3016	100.00	1	100.

Table 7.35. Site 22IT576. Block D: Nonutilized debitage by size and raw material.

	1.0-Inch		0.5-Inch		0.25-Inch	
	n	%	n	%	n	%
Agate			2	0.02	2	<.01
Bangor, Blue-green			3	0.03	63	0.08
Bangor, Fossiliferous	1	0.46	10	0.11	96	0.12
Bangor, Little Mountain			1	0.01		
Camden, Heated	72	33.18	6026	68.68	58862	74.67
Camden, Unheated	37	17.05	1013	11.55	5800	7.36
Chalcedony			1	0.01	12	0.02
Flint Ridge			1	0.01	8	0.01
Fort Payne	3	1.38	334	3.81	6232	7.91
Fort Payne, Fossil.			6	0.07	140	0.18
Novaculite			2	0.02	64	0.08
Oolitic					2	<.01
Pickwick	2	0.92	45	0.51	217	0.28
Tuscaloosa, Heated	2	0.92	112	1.28	2250	2.85
Tuscaloosa, Unheated	16	7.37	256	2.92	1303	1.65
Other Chert			1	0.01	15	0.02
Conglomerate	29	13.36	216	2.46	667	0.85
Greenstone					2	<.01
Hematite			3	0.03	8	0.01
Limonite					1	<.01
Petrified Wood					2	<.01
Quartz			2	0.02	19	0.02
Quartzite	1	0.46	8	0.09	76	0.10
Quartzite, Tallahatta			2	0.02	128	0.16
Sandstone	2	0.92	8	0.09	70	0.09
Sandstone, Ferr.	52	23.96	680	7.75	2203	2.79
Siltstone			3	0.03	14	0.02
Unidentified			39	0.44	576	0.73
TOTALS	217	100.00	8774	100.00	78832	100.00

Table 7.36. Site 22IT576. Ranking of most numerous raw material types of non-utilized flakes.

MATERIAL	1.0-Inch BLOCKS					0.5-Inch BLOCKS					0.25-Inch BLOCKS				
	A	B	C	D	m	A	B	C	D	m	A	B	C	D	m
Heated Camden	2	1	3	1	1.75	1	1	1	1	1.00	1	1	1	1	1.00
Unheated Camden	3	-	2	3	2.67	3	3	3	2	2.75	3	3	3	3	3.00
Fort Payne	-	-	4	6	5.00	4	4	6	4	4.50	2	2	2	2	2.00
Heated Tuscaloosa	-	4	-	7	5.50	7	7	7	7	7.00	5	6	5	4	5.00
Unheated Tuscaloosa	3	3	3	5	3.50	6	6	4	5	5.25	6	5	4	6	5.00
Conglomerate	4	3	-	4	3.67	5	5	5	6	5.25	7	7	6	7	6.75
Ferr. Sandstone	1	2	1	2	1.50	2	2	2	3	2.25	4	4	3	5	4.00

LEVEL	Bangor, Blue-green	Bangor, Fossil.	Camden, Heated	Camden, Unheated	Chancedony	Fort Payne	Ft. Payne, Fossil.	Novaculite	Oolitic	Pickwick	Tuscaloosa, Heated	Tuscaloosa, Unheated	Conglomerate	Quartz	Quartzite	Quartzite, Tallahatta	Sandstone	Sandstone, Ferr.	Unidentified	LEVEL TOTALS N=	%
1			77.91	5.66		7.26	0.06			0.37	1.85	0.43	1.95		0.09	0.06		4.62		1626	25.81
2	0.05	0.14	71.83	5.44	0.05	11.02	0.19			0.14	2.83	1.67	1.02		0.11	0.42		4.46	0.60	2151	34.15
3			66.32	2.27		14.66	1.02	0.11		0.23	2.95	2.61	1.02		0.17	0.34		5.00	3.86	880	13.97
4		0.17	62.41	9.31	0.17	13.79	0.17			0.17	1.21	2.76	1.21		0.30	0.34	0.69	6.90	0.69	580	9.21
5		0.30	62.28	8.98		13.17					1.80	1.50	1.50			0.60		7.78	1.50	334	5.30
6			52.03	13.02		17.89	0.81				4.83	1.63	0.81			0.81	0.81	4.88	1.63	123	1.95
7			44.83	12.64		18.39					3.45	1.15	1.15					18.39		87	1.38
8		1.39	61.11	13.89		15.28							1.39					4.17	2.78	72	1.14
9			47.75	8.11		21.62			0.90	2.70	1.80	3.60	4.50					9.01		111	1.76
10			72.73	5.19		3.90				0.65	2.60	2.60	2.60		0.65			8.44	0.65	154	2.44
11			60.24	13.25		7.32					4.82	4.82		1.20				7.23	1.20	83	1.32
12			50.00	42.86		7.14														14	0.22
13			50.00	35.00		5.00					10.00									20	0.32
14			31.25	62.50		6.25														16	0.25
15			42.11	31.58		10.53					10.53		5.26							19	0.30
16			37.50	62.50																8	0.13
17			20.00	40.00		20.00							20.00							5	0.08
18			20.00									20.00	20.00		20.00			20.00		5	0.08
19			60.00	20.00		20.00														5	0.08
20			50.00															50.00		4	0.06
21			50.00															50.00		2	0.03
TYPE TOTALS																					
N=	1	6	4372	416	2	699	7	1	1	17	154	103	88	1	7	18	5	339	62	6299	
%	0.02	0.10	69.41	6.60	0.03	11.10	0.11	0.01	0.01	0.27	2.44	1.64	1.40	0.02	0.11	0.29	0.08	5.38	0.98		100.00

Table 7.37. Site 22IT576. Block A. Distribution of 0.25 inch debitage by raw material type

LEVEL	Bangor, Blue-green	Bangor, Fossil.	Camden, Heated	Camden, Unheated	Chalcedony	Fort Payne	Ft. Payne, Fossil.	Novaculite	Pickwick	Tuscaloosa, Heated	Tuscaloosa, Unheated	Conglomerate	Hematite	Quartzite	Quartzite, Tallahatta	Sandstone	Sandstone, Ferr.	Siltstone	Unidentified	LEVEL TOTALS N=	LEVEL TOTALS %
1	0.05	0.16	85.23	2.19		5.71		0.05	0.21	1.12	1.12	0.32	0.05		0.16		3.25		0.37	1875	31.83
2	0.11	0.11	78.83	2.48		8.67	0.23	0.11	0.11	2.48	2.03	0.68		0.11	0.11	0.45	3.15		0.34	888	15.07
3			81.72	4.29		6.62	0.09		0.09	0.28	1.49	0.47			0.19	0.75	3.45		0.56	1072	18.20
4		0.14	74.12	4.92	0.14	8.72	0.14		0.28	2.25	1.97	1.13		0.14	0.14		4.78		1.13	711	12.07
5			70.23	6.27		8.09	0.52	0.26		2.09	3.66	0.78		0.26	0.52		4.96	0.26	2.09	383	6.50
6		0.36	68.59	9.75		6.68	0.36			1.81	2.89	1.44			0.72		5.78		1.44	277	4.70
7			68.49	6.85		16.44				1.37	0.68	2.05					4.11			146	2.48
8		0.64	60.90	7.05		7.69				1.92	[illegible]	1.92					17.95			156	2.65
9	0.52	0.52	58.55	18.13		4.66				0.52	4.66	1.04					9.48		1.55	193	3.28
10			70.21	14.89		2.13					2.13						10.64			47	0.80
11			46.34	41.46		2.44				2.44	2.44						4.88			41	0.70
12			75.00	16.67															8.33	12	0.20
13			75.00	12.50															12.50	8	0.14
14			33.33	50.00						16.67										6	0.10
15			41.67	50.00													8.33			12	0.12
16			48.65	24.32		2.70	5.41				18.92									37	0.63
17			28.57	64.29															7.14	14	0.24
18			80.00	20.00																5	0.08
19			62.50	25.00							12.50									8	0.14
TYPE TOTALS																					
N=	3	8	4573	306	1	415	9	3	8	83	114	40	1	3	11	12	256	1	42	5891	
%	0.5	0.14	77.63	5.23	0.02	7.04	0.15	0.05	0.14	1.41	1.94	0.68	0.02	0.05	0.19	0.20	4.35	0.02	0.71		100.00

Table 7.38. Site 22IT576. Block B. Distribution of 0.25 inch debitage by raw material type.

LEVEL	Bangor, Blue-green	Bangor, Fossil.	Camden, Heated	Camden, Unheated	Fort Payne	Ft. Payne, Fossil.	Pickwick	Tuscaloosa, Heated	Tuscaloosa, Unheated	Conglomerate	Hematite	Quartzite	Quartzite, Tallahatta	Sandstone	Sandstone, Ferr.	Unidentified	LEVEL TOTALS N=	%
1		0.17	81.62	3.15	7.12	0.33	0.33	1.32	1.49	0.50			0.50		3.31	0.17	604	20.03
2		0.26	72.89	2.89	9.47	0.26	0.26	2.37	2.11	2.11		0.26		0.26	6.58	0.26	380	12.60
3			65.38	6.30	12.11		0.48	2.91	2.91	1.21		0.48	0.24		7.26	0.73	413	13.69
4			59.81	3.27	14.49		0.47	0.47	4.21	3.27			0.47		8.41	5.14	214	7.10
5		0.49	47.55	9.80	17.16			2.45	3.92	2.45		0.98	0.98	0.49	12.25	1.47	204	6.76
6	0.53	0.53	65.78	5.35	10.70			1.07	6.95	2.14		0.53			4.81	1.60	187	6.20
7			65.96	6.38	6.38	0.43		1.70	1.28	2.13		0.43			11.49	3.83	235	7.79
8			71.43	10.94	4.56			0.61	2.43	1.22		0.30	1.52	0.30	5.17	1.52	329	10.91
9		0.69	65.17	13.10	4.48		0.34	1.38	1.03	2.41					11.38		290	9.62
10			75.31	16.05				1.23			1.23				6.17		81	2.69
11		2.70	62.16	24.32			2.70		2.70						5.41		37	1.23
12			61.90	23.31				9.52								4.76	21	0.70
13			95.24	4.76													21	0.70
TYPE TOTALS																		
N=	1	7	2084	210	258	4	8	50	74	48	1	8	12	3	211	37	3016	
%	0.03	0.23	69.10	6.96	8.55	0.13	0.27	1.66	2.45	1.59	0.03	0.27	0.40	0.10	7.00	1.23		100.00

Table 7.39. Site 22IT576. Block C. Distribution of 0.25 inch debitage by raw material type.

LEVEL	Agate	Bangor, Blue-green	Bangor, Fossiliferous	Camden, Heated	Camden, Unheated	Chalcedony	Flint Ridge	Fort Payne	Fort Payne, Fossiliferous	Novaculite	Oolitic	Pickwick	Tuscaloosa, Heated	Tuscaloosa, Unheated	Chert, Other	Conglomerate	Greenstone	Hematite	Limonite	Petrified Wood	Quartz	Quartzite	Quartzite, Tallahatta	Sandstone	Sandstone, Ferr.	Siltstone	Unidentified	LEVEL TOTALS N=	LEVEL TOTALS %
1.1				81.74	7.05	0.06		5.26	0.05			0.33	2.14	0.62		0.57					0.02	0.16	0.08		1.43		0.50	6439	8.17
1.2		0.01	0.05	78.44	6.45	0.01		5.95	0.13	0.05		0.27	3.59	0.63	0.03	0.63				0.01	0.01	0.07	0.07	0.02	2.69		0.89	15173	19.25
1.3		0.02	0.12	81.13	4.24	0.03		7.25	0.10	0.07		0.17	1.93	0.54	0.02	0.60		0.03			0.02	0.06	0.18	0.37	2.37	0.01	0.77	15264	19.36
2		0.07	0.11	76.58	5.86			10.15	0.27	0.11		0.15	2.21	0.74		0.92	0.01				0.01	0.08	0.11	0.04	2.21	0.06	0.31	11309	14.35
3		0.24	0.19	72.81	6.57			11.37	0.34	0.15		0.26	2.63	1.16	0.01	0.79					0.02	0.13	0.14	0.02	2.63		0.51	8434	10.70
4		0.16	0.07	72.22	4.93			11.23	0.24	0.24	0.04	0.38	4.15	1.38	0.07	0.75	0.02	0.02				0.11	0.27	3.17	0.02		0.51	4504	5.71
5		0.17	0.17	68.00	7.83		0.03	11.68	0.03	0.17		0.31	5.39	1.66		0.73			0.03			0.17	0.31		2.86		0.45	3562	4.52
6		0.41	0.15	66.26	8.97		0.10	13.71	0.25	0.05		0.36	3.36	1.63	0.10	0.66		0.05				0.15	0.56		3.01		0.20	1962	2.49
7		0.06	0.24	62.71	11.26		0.30	11.03	0.36	0.12		0.41	3.26	2.49		0.89		0.06			0.12	0.06	0.59	0.06	5.45		0.53	1687	2.14
8	0.12	0.18	0.60	62.66	9.11			12.09	0.48			0.12	3.69	2.50		1.49					0.18	0.24		0.12	5.96	0.06	0.42	1679	2.13
9		0.17	0.23	55.65	18.70			4.69	0.29	0.06		0.12	2.90	3.13	0.06	4.11		0.06			0.17	0.23	0.46	0.06	8.16	0.06	0.69	1727	2.19
10		0.11	0.42	55.48	22.55	0.11		3.11	0.32			0.42	2.53	3.95		3.06					0.05	0.11	0.26		7.38		0.16	1898	2.41
11			0.33	53.05	24.36			2.66				0.11	3.10	5.98		2.21					0.11	0.22	0.33		6.76	0.33	0.44	903	1.15
12				60.23	20.08			3.03				0.38	4.17	4.17		1.52									5.30		1.14	264	0.33
13				67.46	17.20			2.87				0.96	2.87	3.83		1.44									2.39		0.96	205	0.27
14				75.44	9.02			1.00					5.26	4.51		0.50									0.75		3.51	399	0.51
15				68.74	10.07			0.22				1.32	1.93	11.89											0.17		5.67	1817	2.30
16				66.08	13.12			0.49				0.39	2.72	15.84											0.29		1.07	1029	1.31
17				71.72	10.80			0.46				0.46	1.61	13.79											0.69		0.46	435	0.55
18			1.75	66.67	17.54			1.75				1.75	3.51	7.02														57	0.07
19				73.91				8.70				4.35		13.04														23	0.03
20				68.75	12.50								6.25	6.25		6.25												16	0.02
21				85.71	14.29																							14	0.02
22				62.50	25.00			6.25					6.25															16	0.02
23				33.33	33.33								16.67														16.67	6	0.01
24				80.00	20.00																							5	0.01
25					100.00																							1	<0.01
TYPE TOTALS																													
N=	2	63	98	58862	5800	12	8	6232	140	64	2	217	2250	1303	15	667	2	8	1	2	19	76	128	70	2203	14	576	78832	
%	<0.01	0.08	0.12	74.67	7.36	0.02	0.01	7.91	0.18	0.08	<0.01	0.28	2.05	1.65	0.02	0.85	0.01	0.01	<0.01	<0.01	0.02	0.10	0.16	0.09	2.83	0.02	0.73		100.00

Table 7.40 , Site 22IT576. Block D. Distribution of 0.25 inch debitage by raw material type

LEVEL	Agate	Bangor, Blue-green	Bangor, Fossil.	Bangor, Little Mountain	Camden, Heated	Camden, Unheated	Chalcedony	Flint Ridge	Fort Payne	Ft. Payne, Fossil.	Novaculite	Pickwick	Tuscaloosa, Heated	Tuscaloosa, Unheated	Chert, Other	Conglomerate	Hematite	Quartz	Quartzite	Quartzite, Tallahatta	Sandstone	Sandstone, Ferr.	Siltstone	Unidentified	LEVEL TOTALS N=	%
1.1					80.25	7.05	0.18		3.00	0.18		0.18	0.88	1.06		2.29						4.94			567	6.46
1.2					73.08	8.88			4.88			0.88	1.29	0.88		1.83			0.14			7.53		0.61	1475	16.81
1.3			0.20	0.07	77.92	5.60			4.20	0.13	0.07	0.07	0.60	1.20		1.93		0.07	0.13		0.13	7.34	0.07	0.27	1499	17.08
2		0.09	0.09		71.64	11.44			4.85			0.27	0.82	0.73		2.65					0.27	7.04		0.09	1093	12.46
3			0.12		71.73	8.55			6.89		0.12	0.12	0.71	3.92	0.12	1.31			0.12		0.24	5.94		0.12	842	9.60
4					74.77	5.68			3.64	0.23		0.45	2.05	2.27		2.27					0.23	8.41			440	5.01
5			0.28		66.38	13.96			2.56			0.57	2.28	2.28		1.14		0.28				9.40		0.85	351	4.00
6					63.32	12.56			3.52				2.51	4.02		3.02	0.50					10.05			199	2.27
7					56.00	14.50		0.50	13.50				1.50	3.00		2.00						8.50		0.50	200	2.28
8	0.49	0.49			57.35	19.12			1.47			0.49	3.43	6.86		1.96			0.49			7.84			204	[illegible]
9					45.83	21.35			0.26			1.04	1.82	2.86		8.33	0.52		0.52			16.15	0.26	1.04	384	4.38
10					47.07	23.63			0.57			1.51	1.13	1.89		7.18			0.38			16.26			529	6.03
11			0.53		50.26	23.81			1.06	0.53		1.06	0.53	6.88		3.17						11.11	0.53	0.53	189	2.15
12					36.36	29.44							2.27	6.82		4.55						15.91		4.55	44	0.50
13					61.11	27.78							5.56			5.56									18	0.21
14					63.64	21.21							3.03	6.06								3.03		3.03	33	0.38
15					63.91	15.98			0.59			2.07	1.48	11.83								0.89		3.25	338	3.85
16			0.35		64.36	16.96							2.77	14.88								0.35		0.35	289	3.29
17			1.82		54.55	21.82			1.82	1.82				18.18											55	0.63
18					88.89	11.11																			9	0.10
19					100.00																				3	0.03
20					87.50	12.50																			8	0.09
21					33.33									66.67											3	0.03
22					100.00																				2	0.02
TYPE TOTALS																										
N=	2	3	10	1	6026	1013	1	1	334	6	2	45	112	256	1	216	3	2	8	2	8	680	3	39	8774	
%	0.02	0.03	0.11	0.01	68.68	11.55	0.01	0.01	3.81	0.07	0.02	0.51	1.28	2.92	0.01	2.46	0.03	0.02	0.09	0.02	0.09	7.75	0.03	0.44		100.00

Table 7.41. Site 22IT576. Block D. Distribution of 0.5 inch debitage by raw material type.

Table 7.41. Site 22IT576. Frequency of ground stone tools by raw material type.

CATEGORY	CAMDEN, HEATED	CAMDEN, UNHEATED	TUSCALOOSA, HEATED	TUSCALOOSA, UNHEATED	ANTHRACITE	CONGLOMERATE	GREENSTONE	HEMATITE	JASPER	LIMONITE	QUARTZ	QUARTZITE	PETRIFIED WOOD	SANDSTONE	Fe, Ss	SILTSTONE	TOTAL
HAMMERSTONE	8	10		4		3						23			4		52
PITTED ANVILSTONE		1				2							1		27	2	33
HAMMER/ANVILSTONE		1										1					2
ABRADER														1	14	1	16
MULLER															4	1	5
MORTAR															7	1	6
PESTLE												1					1
CELT							1										1
GORGET								2									2
ATLATL WEIGHT								5				1			1		7
DISCOIDAL								1									1
BEAD								6	3						9	3	21
SANDSTONE SHERD														9	1		10
WORKED SANDSTONE CONCREATION								1							3		4
GROUND LIMONITE										56							56
GROUND HEMATITE								30									30
EDGE GROUND COBBLE				1													1
UNID. GROUND STONE FRAGMENT	3		2		1	8	6	66		17		5	2	125	1133	18	1386

Table 7.42. Site 22IT576. Frequency of ground stone tools by raw material type. (continued)

CATEGORY	CAMDEN, HEATED	CAMDEN, UNHEATED	TUSCALOOSA, HEATED	TUSCALOOSA, UNHEATED	ANTHRACITE	CONGLOMERATE	GREENSTONE	HEMATITE	JASPER	LIMONITE	QUARTZITE	PETRIFIED WOOD	SANDSTONE	Fe Ss	SILTSTONE	TOTAL
OTHER (GROUND FLAKE)			1			1	2	6					2	51	4	67
MULLER/PITTED ANVILSTONE											1			7		8
DRILL CORE								5			1			1	1	8
BEAD PREFORM								5						2		7
MULLER/HAMMERSTONE	1										1					2
BOATSTONE													1			1
GROUND PP/K	1															1
TUBULAR PIPE														2		2
MORTAR/ANVILSTONE														1		1
PITTED ANVILSTONE/ ABRADER														2		2
TOTALS																
N=	13	12	3	5	1	14	9	127	3	73	34	3	138	1269	31	1735
%	.75	.69	.17	.29	.06	.81	.52	7.32	.17	4.21	1.84	.17	7.95	73.14	1.79	100.00

Table 7.43. Site 22IT576: Ground Stone Tool Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Hammerstone				
WEIGHT	44	0	140.4	90.8	18.0	393.1	375.1	8245.4
LENGTH	44	0	61.6	16.3	31.3	110.4	79.1	265.6
WIDTH	44	0	47.9	10.8	25.8	71.3	45.5	116.8
THK	44	0	36.8	10.3	13.7	53.6	41.9	106.3
HOLEDIAM	0	44	-	-	-	-	-	-
				Pitted Anvilstone				
WEIGHT	20	0	268.2	193.8	31.7	954.5	922.8	37554.2
LENGTH	20	0	86.0	19.7	48.0	126.7	78.7	388.8
WIDTH	20	0	62.9	11.2	32.7	81.4	48.7	125.0
THK	20	0	34.4	11.8	15.2	67.9	52.7	139.4
HOLEDIAM	0	20	-	-	-	-	-	-
				Abrader				
WEIGHT	12	0	117.6	98.5	6.7	314.8	308.1	9696.1
LENGTH	12	0	71.6	28.9	35.2	149.7	114.5	837.2
WIDTH	12	0	55.1	20.7	26.8	103.6	76.8	428.3
THK	12	0	21.5	6.9	9.0	29.1	20.1	47.3
HOLEDIAM	0	12	-	-	-	-	-	-
				Muller				
WEIGHT	2	0	284.6	23.5	268.0	301.2	33.2	551.1
LENGTH	2	0	71.9	8.6	65.8	78.0	12.2	74.4
WIDTH	2	0	62.0	0.5	61.7	62.4	0.7	0.2
THK	2	0	36.4	7.9	30.8	42.0	11.2	62.7
HOLEDIAM	0	2	-	-	-	-	-	-
				Mortar				
WEIGHT	4	0	319.7	176.3	163.1	572.6	409.5	31066.0
LENGTH	4	0	104.9	19.4	75.8	115.4	39.6	378.0
WIDTH	4	0	86.5	24.7	56.0	107.4	51.4	609.9
THK	4	0	30.9	5.3	26.2	38.3	12.1	28.2
HOLEDIAM	0	4	-	-	-	-	-	-

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Pestle								
WEIGHT	1	0	505.5	-	505.5	505.5	0	-
LENGTH	1	0	77.0	-	77.0	77.0	0	-
WIDTH	1	0	72.3	-	72.3	72.3	0	-
THK	1	0	63.0	-	63.0	63.0	0	-
HOLEDIAM	0	1	-	-	-	-	-	-
Grooved Axe								
WEIGHT	1	0	172.0	-	172.0	172.0	0	-
LENGTH	1	0	77.2	-	77.2	77.2	0	-
WIDTH	1	0	58.7	-	58.7	58.7	0	-
THK	1	0	31.3	-	31.3	31.3	0	-
HOLEDIAM	0	1	-	-	-	-	-	-
Gorget								
WEIGHT	1	0	8.9	-	8.9	8.9	0	-
LENGTH	1	0	32.2	-	32.2	32.2	0	-
WIDTH	1	0	21.4	-	21.4	21.4	0	-
THK	1	0	6.7	-	6.7	6.7	0	-
HOLEDIAM	1	0	7.5	-	7.5	7.5	0	-
Discoidal								
WEIGHT	1	0	3.0	-	3.0	3.0	0	-
LENGTH	1	0	19.5	-	19.5	19.5	0	-
WIDTH	1	0	19.0	-	19.0	19.0	0	-
THK	1	0	5.7	-	5.7	5.7	0	-
HOLEDIAM	0	1	-	-	-	-	-	-
Bead								
WEIGHT	7	0	4.6	2.5	1.5	8.6	7.1	6.1
LENGTH	7	0	14.2	5.9	7.2	23.0	15.8	35.1
WIDTH	7	0	15.2	2.1	11.7	18.4	6.7	4.3
THK	7	0	13.5	2.3	9.6	16.0	6.2	5.3
HOLEDIAM	7	0	6.1	0.7	5.1	7.2	2.1	0.4

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Edge Ground Cobble								
WEIGHT	1	0	103.5	-	103.5	103.5	0	-
LENGTH	1	0	54.5	-	54.5	54.5	0	-
WIDTH	1	0	44.9	-	44.9	44.9	0	-
THK	1	0	29.4	-	29.4	29.4	0	-
HOLEDIAM	0	1	-	-	-	-	-	-
Muller/Pitted Anvilstone								
WEIGHT	5	0	355.2	180.7	226.4	664.2	437.8	32658.3
LENGTH	5	0	90.9	7.5	85.2	104.0	18.8	56.7
WIDTH	5	0	65.3	22.3	38.7	93.2	54.5	498.2
THK	5	0	33.4	5.1	26.7	37.8	11.1	26.2
HOLEDIAM	0	5	-	-	-	-	-	-
Drill Core								
WEIGHT	7	0	1.4	0.6	0.4	2.1	1.7	0.4
LENGTH	7	0	9.2	2.0	6.0	12.1	6.1	3.9
WIDTH	7	0	9.6	1.7	6.8	11.6	4.8	2.8
THK	7	0	9.3	1.7	6.7	11.4	4.7	2.9
HOLEDIAM	0	7	-	-	-	-	-	-
Bead Preform								
WEIGHT	7	0	4.7	2.5	1.8	8.5	6.7	6.3
LENGTH	7	0	18.0	4.4	12.1	23.9	11.8	19.5
WIDTH	7	0	12.6	5.9	1.6	20.6	19.0	34.3
THK	7	0	11.1	1.8	8.4	13.3	4.9	3.4
HOLEDIAM	0	7	-	-	-	-	-	-
Muller/Hammerstone								
WEIGHT	1	0	156.5	-	156.5	156.5	0	-
LENGTH	1	0	68.2	-	68.2	68.2	0	-
WIDTH	1	0	60.6	-	60.6	60.6	0	-
THK	1	0	36.6	-	36.6	36.6	0	-
HOLEDIAM	0	1	-	-	-	-	-	-

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
			Abrader/Anvilstone					
WEIGHT	1	0	259.5	-	259.5	259.5	0	-
LENGTH	1	0	86.0	-	86.0	86.0	0	-
WIDTH	1	0	85.0	-	85.0	85.0	0	-
THK	1	0	23.8	-	23.8	23.8	0	-
HOLEDIAM	0	1	-	-	-	-	-	-
			Mortar/Anvilstone					
WEIGHT	1	0	361.3	-	361.3	361.3	0	-
LENGTH	1	0	90.0	-	90.0	90.0	0	-
WIDTH	1	0	86.4	-	86.4	86.4	0	-
THK	1	0	40.0	-	40.0	40.0	0	-
HOLEDIAM	0	1	-	-	-	-	-	-
			Pitted Anvilstone/Abrader					
WEIGHT	2	0	385.8	159.2	273.3	498.4	225.1	25335.0
LENGTH	2	0	103.1	27.1	84.0	122.3	38.3	733.4
WIDTH	2	0	86.5	8.3	80.7	92.4	11.7	68.4
THK	2	0	30.8	2.2	29.3	32.4	3.1	4.8
HOLEDIAM	0	2	-	-	-	-	-	-

Table 7.44. Site 22IT576. Percentage distribution of Introduced Rock in Block A.

LEVEL	CHALK	FIRE CRACKED CHERT CHUNKS	COBBLE/ PEBBLE	CONGLOMERATE	CRINOID	HEMITITE	LIMESTONE	LIMONITE	MANGANESE NODULES	OCHRE	PETRIFIED WOOD	QUARTZ	QUARTZITE	SANDSTONE	SANDSTONE, FERR.	SANDSTONE CONCREATION	SLAG	LEVEL TOTALS N=	LEVEL TOTALS %
1	.01	4.21	.88	1.80		.29	.01	.37			.76		.05	1.30	90.32			16294	100.00
2		2.88	1.07	1.21		2.00	.01	.33			.51		.14	2.63	88.27	.05		19958	99.08
3		5.43	1.40	2.80		2.09		2.84			.52		.25	2.15	82.52			7287	100.00
4	.02	5.12	.80	.42		.56		.23			.41		.21	1.52	90.66			10410	100.00
5		1.09	1.47	2.34		1.62		4.35			2.01			.44	86.74			5430	100.06
6	.03	1.20	1.64	.45		2.26		.21	.03		.10		.10	.17	92.12	1.68		2920	100.00
7		.62	2.93	4.26		.18				.09	.09			.09	91.76			1128	100.00
8		.35	1.30	1.80		2.80			.05		3.30			.15	90.26			2002	100.00
9		4.79	1.75	3.72		4.17		.45			3.15		.06	12.39	69.54			1776	100.00
10		2.27	1.41	3.52		1.35		.49		.03	3.03	.03	.21	2.63	84.84		.18	3265	100.00
11		1.91	1.48	2.79	.05	2.51		.77			2.62	.33		.06	87.49			1830	99.93
12		2.36	6.30			.79								7.87	82.68			127	100.00
13		20.83	33.33			8.33									37.50			24	100.00
14		2.04	10.20								4.08				83.67			49	100.00
15		43.48	11.59												44.93			69	100.00
16			26.09								8.70				65.22			23	100.00
17		3.45	27.59												68.97			29	100.00
18			14.29	7.14							7.14		7.14		64.29			14	100.00
19		13.33	40.00	6.67											40.00			15	100.00
20		4.55	54.55												40.91			22	100.00
21		25.00													75.00			8	100.00
TYPE TOTALS N	4	2714	897	1242	1	1037	2	642	2	2	692	7	87	1403	63884	58	6	72680	
TYPE TOTALS %	--	3.73	1.23	1.71	--	1.43	--	0.88	--	--	0.95	0.01	0.12	1.93	87.90	0.08	0.01		99.98

Table 7.45. Site 22IT576. Percentage distribution of Introduced Rock in Block B.

LEVEL	CHALK	FIRE CRACKED CHERT CHUCKS	COBBLE/ PEBBLE	CONGLOMERATE	HEMATITE	LIMESTONE	LIMONITE	MAGANESE NODULE	OCHRE	PETRIFIED WOOD	QUARTZITE	SANDSTONE	SANDSTONE, FERR.	SANDSTONE, CONCREATION	SILTSTONE	UNIDENTIFIED	LEVEL TOTALS N=	LEVEL TOTALS %
1		4.07	1.02	1.07	.53		.58			.36	.15	1.82	90.39				20750	101.06
2		3.71	.72	2.18	.34		.19			.40		3.07	88.69	.59	.02	.10	16041	100.01
3	.01	4.08	.82	1.52	.38	.01	1.00			.15	.01	1.75	90.28		.01		13912	100.02
4		2.56	.77	1.02	.17		.10			.93	.01	1.68	92.56		.20		10511	100.00
5		4.18	1.64	2.04	.70		.34		.10	.54	.06	1.52	88.67				6262	99.79
6		3.08	1.95	1.67	.13		.06			.84		.75	91.52				4668	100.00
7		2.21	2.72	7.29	2.05		.25			1.12	.06	.22	83.38	.59	.11		3567	100.00
8		2.29	1.76		1.76		.12			1.31		.16	92.59				2442	99.99
9		2.17	1.33	.69	.76		1.50		.02	.74	.02	.20	92.56				4059	99.99
10		4.24	3.53	.82	.47		.12		1.20				90.70				850	101.08
11		7.50	4.17				.84						87.50				120	100.01
12			3.73	2.24				.75				3.73	89.55				134	100.00
13			6.06	3.03						2.02			88.89				99	100.00
14		4.00	16.00	4.00	4.00								72.00				25	100.00
15		5.77	3.85				1.92					51.92	36.54				52	100.00
16		8.51	34.04										57.45				47	100.00
17			5.56										94.44				126	100.00
18			3.45										96.55				29	100.00
19		6.25	12.50										81.25				16	100.00
TYPE TOTAL N	1	2958	988	1397	436	1	400	1	8	439	40	1472	75409	115	29	16	83710	
TYPE TOTAL %	--	3.53	1.18	1.62	0.52	--	0.48	--	0.01	0.52	0.05	1.76	90.08	0.14	0.03	0.02		99.94

Table 7.46. Site 22IT576. Percentage distribution of Introduced Rock in Block C.

LEVEL	FIRE CRACKED CHERT CHUNKS	COBBLE/PEBBLE	CONGLOMERATE	FOSSIL	HEMATITE	LIMESTONE	LIMONITE	OCHRE	PETRIFIED WOOD	QUARTZITE	SANDSTONE	SANDSTONE, FERR-	SANDSTONE, CONCREATION	LEVEL TOTALS N=	LEVEL TOTALS %
1	3.43	.87	.43		.20	.05	.59		.15		.98	92.77		9332	99.46
2	2.86	.72	.65		.07		.20		1.76	.55	.29	92.91		8048	100.00
3	12.26	.50	.53		.56		.67		.10	.84	.49	84.06		11494	100.01
4	6.25	.69	.05		.11		.24		.33	.02	1.97	90.35		6644	100.01
5	2.59	.60	8.11		.66	.03	.36		2.78	.26	.57	82.33	1.71	5797	100.00
6	3.96	.65	1.29		.20		.28		1.13	.02	.32	92.15		4955	100.00
7	1.32	1.47	.58		.69		.86		1.89		.19	92.98		7197	99.95
8	2.96	2.28	4.[illegible]6		2.03		3.90		2.03	.23	1.33	80.00	.66	4426	99.98
9	3.28	1.43	2.68		1.68		.72	.03	4.47	.08	2.43	83.21		3626	100.01
10	3.08	.62	.09	.09	3.16		.62		.44	.09	1.85	89.98		1138	100.02
11	1.64	1.15	.33		.98		.16		.82			94.92		610	100.00
12	8.82	5.88	2.94						5.88			76.47		34	99.99
13	1.67	1.67			.83							95.83		120	100.00
TYPE TOTALS N	3115	586	1085	1	388	7	468	1	807	171	532	56132	128	63421	
TYPE TOTALS %	4.91	0.92	1.71	--	0.61	0.01	0.74	--	1.27	0.27	0.84	88.51	0.20		99.99

Table 7.47. Site 22IT576. Percentage destribution of Introduced Rock in Block D

LEVEL	CHALK	FIRE CRACKED CHERT CHUNKS	COBBLE/PEBBLE	CONGLOMERATE	CRINOID	FOSSIL	GALENA	GRAPHITE	HEMATITE	LIMESTONE	LIMONITE	MANGANESE NODULE	OCHRE	PETRIFIED WOOD	QUARTZ	QUARTZITE	SANDSTONE	SANDSTONE, FERR.	SANDSTONE, CONCREATION	SILTSTONE	SLAG	STEATITE	LEVEL N=	TOTALS %
1.1		7.11	1.71	1.22					.82	.01	.37			.70		.06	1.93	86.06					24511	4.70
1.2	<0.01	5.50	1.58	1.05	<0.01				1.15	<0.01	.94			.54		.08	1.52	87.64		<0.01			70028	13.42
1.3	<0.01	4.12	1.29	1.19			.01		1.20	.02	.95			.64		.96	1.52	88.07	.02	<0.01	.01		75602	14.49
2	.01	3.45	1.00	1.23					1.08	.03	.42			.67		.19	2.39	89.47	.06				83926	16.08
3	<0.01	3.90	1.03	1.72			<0.01		1.13	.03	.63		<0.01	.88		.10	1.13	89.34	.05	<0.01			65253	12.50
4	<0.01	4.66	1.18	1.11				.01	.83	<0.01	.34		.01	.55	<0.01	.12	1.10	90.07	.02	<0.01	<0.01		40765	7.81
5	.04	2.82	1.36	2.57					1.03	.01	.43		<0.01	1.61		.08	2.34	87.67	.04	.01	<0.01		34404	6.59
6	<0.01	2.62	1.81	.93					.73	.01	.50		.07	.62		.03	1.03	91.28	.36				21852	4.19
7		3.01	4.19	2.51					.73		.78	.01	.01	.97	.08	.41	.71	85.90	.65	.04	.02		18961	3.63
8	.01	3.46	10.44	2.17				.01	1.23		.85		.07	1.98	.01	.04	.60	79.10	.01	.02	.01		19308	3.71
9		2.46	4.33	3.96					2.56		1.73		.09	3.34	.01	.04	1.73	79.74					24614	4.72
10	<0.01	3.82	2.19	2.80		.01		.02	1.02		1.35		.11	3.52	.01	1.34	1.03	82.41	.36				26293	5.04
11		3.04	6.07	2.02					.64		.59		.07	1.50	.08	.36	.38	85.25					10769	2.06
12		2.33	17.63	3.50					.55		.75		.14	1.78	.27		1.92	71.12					1458	.28
13		6.61	23.19						.65		.78		.26	10.88				57.64					772	.15
14		17.37	22.63	2.89					1.45		.13			4.47			0.13	50.79				.13	760	.15
15	.09	4.18	19.18	.09					2.37					.47	.66	.09		72.84					1053	.20
16		8.03	26.58	4.74					.79		.39			.53		.13	7.50	51.32					760	.15
17		15.60	29.27						.21	.21	2.14	2.99		15.38			1.92	32.26					468	.09
18		3.06	22.45	2.04								19.39						53.06					98	.02
19			18.18						3.03									78.79					33	.01
20			38.89	2.78								13.89						44.44					36	.01
21			38.98						1.69									59.32					59	.01
22			64.52												16.13			19.35					31	.01
23		4.76	19.05								4.76	9.52						61.90					21	<0.01
24			100.00																				1	<0.01
N=	27	21171	11739	8560	2	2	5	[illegible]	5813	69	[illegible]	41	100	5781	44	1596	7992	4546[illegible]	422	20	16	1	521916	
%	0.01	4.06	2.25	1.64	<0.01	<0.01	<0.01	<0.01	1.11	0.01	0.73	0.01	0.02	1.11	0.01	0.31	1.53	87.12	0.08	<0.01	<0.01	<0.01		100.00

Table 7.48. Site 22IT576. Distribution of miscellaneous historic material.

PROVENIENCE	LEVEL	WHITEWARE LIP/RIM SHERD	BLUE-GREEN GLASS, BODY SHERD	BRASS KNURLED SCREW	VITRIFIED METAL	PVC PLASTIC SHERD	PLASTIC VIAL CAP	HICKORY NUT SHELL	PEACH PIT	TOTAL
108S/106W	9			1[1]						1
	15						1[1]			1
108S/108W	1-1	1								1
110S/104W	1-1		1							1
112S/98W	5					1[a]				1
112S/100W	3								1	1
	5								1	1
114S/102W	1-3				1					1
Feature 27	6							1		1
TOTAL		1	1	1	1	1	1	1	2	9

a - 1980 Excavation debris (?)
1 - 1979 Testing?

Table 7.49. Site 22IT576. Distribution of hunting and fishing implements in Block D.

PROVENIENCE	LEVEL	12 ga. Primer/Base	12 ga. Shotgun Shell	22 cal. Casing	Lead Shot, 30 cal.	Lead Ball/Bullet 22-30 cal.	Lead Shot, Melted	Lead Split Shot Fishing Line Weight	TOTAL
108S/98W	1-1		1						1
108S/100W	1-1		1						1
108S/104W	3		1						1
	4					1			1
108S/106W	1-1			1					1
110S/108W	1-1		2						2
112S/98W	1-2						1		1
112S/106W	1-1	1							1
112S/108W	1-2		1	1					2
114S/106W	1-1				1				1
Feature 31	6							1	1
TOTAL		1	6	2	1	1	1	1	13

Table 7.50: Site 22IT576. Distribution of metal container fragments in Block D.

PROVENIENCE	LEVEL	LID (METAL CONTAINER?)	RIM FRAG. (METAL CONTAINER?)	RIM FRAG. (LARGE CAN/ BUCKET?)	METAL FRAG. (CONTAINER?)	TOTAL
108S/98W	1-1				7	7
108S/108W	1-1			1		1
110S/98W	1-2				6	6
110S/100W	1-2				1	1
110S/104W	1-2				2	2
	1-3				1	1
	2				4	4
	6				1	1
110S/106W	1-1		1		3	4
110S/108W	1-1		1			1
	1-2				8	8
112S/98W	1-2				7	7
112S/100W	1-1		2			2
	1-2		2			2
	5		1		7	8
114S/98W	1-1				3	3
	1-2				4	4
114S/102W	1-2				1	1
114S/108W	1-2	1				1
TOTAL		1	7	1	55	64

Table 7.51. Site 22IT576. Distribuiton of miscellaneous fasteners, Block D.

PROVENIENCE	LEVEL	CUT NAIL DISTAL FRAGMENT	CUT NAIL MEDIAL FRAGMENT	CUT NAIL PROXIMAL FRAGMENT	6-INCH GUTTER SPIKE	HEXAGONAL HEAD BOLT	WOOD SCREW PROXIMAL FRAGMENT (Hand forged)	DRAWN WIRE FRAGMENT	3/8" HEXAGONAL NUT	3/8" FLAT WASHER	TOTAL
108S/104W	1-1	1									1
108S/106W	1-1			1							1
108S/108W	1-1			1			1				2
110S/106W	1-3							1			1
110S/108W	1-1			1							1
112S/100W	1-1				1[1]						1
	2					1[2]					1
112S/108W	13									1	1
114S/98W	1-1		1								1
114S/102W	1-2								1		1
114S/106W	1-1			1							1
	13									1	1
TOTAL		1	1	4	1	1	1	1	1	2	13

1 - 1979 Testing?

2 - 1980 Excavation?

Table 7:52. Site 22IT576. Distribution of wire nails in Block D.

PROVENIENCE	LEVEL	Ca. 2-2½d.	Ca. 5d.	Ca. 5-6d.	Ca. 6d.	Ca. 6-7d.	Ca. 8d.	Ca. 8-10d.	Ca. 9-10d.	Ca. 10d.	Ca. 10-12d.	Ca. 12d.	Ca. 18d.	Ca. 20d.	Ca. 20-30d.	Ca. 30d	Ca. 30-32d.	Ca. 50-60d. (Spike)	Distal Fragment	Medial Fragment	Proximal Fragment	Finishing Nail Proximal Fragment	Total
108S/100W	1-1																1^{1}						1
108S/102W	1-2																				1		1
	2									1													1
	3																					1	1
108S/104W	2	1																					1
108S/106W	1-1				2				1														3
	1-2																				2		2
	5		1^{2}							1^{2}													2
108S/108W	1-1				1					1											2		4
110S/98W	1-1															1							1
110S/100W	1-1																1^{1}						1
110S/102W	1-1																	1					1
110S/104W	4												\							1			1
110S/106W	1-1				2			3						2							1		8
	1-2			1									1								1		3
110S/108W	1-1							9						1							3		13
112S/98W	1-2				2																		2
112S/100W	1-1										1^{1}				4^{1}								5
	2																	1^{2}					1
	3																				1		1
112S/102W	1-2						1																1
	3						1																1
	5										1^{2}												1

Table 7.52. Site 22IT576. Distribution of wire nails in Block D.(continued)

PROVENIENCE	LEVEL	Ca. 2-2½d.	Ca. 5d.	Ca. 5-6d.	Ca. 6d.	Ca. 6-7d.	Ca. 8d.	Ca. 8-10d.	Ca. 9-10d.	Ca. 10d.	Ca. 10-12d.	Ca. 12d.	Ca. 18d.	Ca. 20d.	Ca. 20-30d.	Ca. 30d	Ca. 30-32d.	Ca. 50-60d. (Spike)	Distal Fragment	Medial Fragment	Proximal Fragment	Finishing Nail Proximal Fragment	Total
112S/104W	1-1																		1				1
	1-2													1									1
112S/106W	1-1							2															2
	2																				1		1
	3																		1				1
112S/108W	1-1				1	1															1		3
	1-2				1					1													2
114S/104W	1-2									1				1									2
	8											1[2]											1
114S/106W	1-1																				2		2
114S/108W	1-1									1											1		2
	1-2						1														1		2
	3											1[2]											1
TOTAL		1	1	1	9	1	3	14	1	6	2	2	1	5	4	1	2	2	2	1	17	1	77

1 - 1979 *Testing?*
2 - 1980 Excavation?

SAMPLE			ANALYSIS DATA					
ID	PROVENIENCE	VOLUME (l)	TOTAL FLORA WT.[a] (g)	HICKORY NUT *Carya* spp.[b] (g)	ACORN *Quercus* spp.[b] (g)	SEED	WOOD[c] (g)	OTHER
1543C	BLOCK A UNIT: 122S/92W Lev. 6 (80.50)	9.00		8.80[c]	(4)[d]0.10		0.10 pine 0.10 indeterminate wood	
698C	BLOCK B UNIT: 128S/108W Lev. 2 (80.80)	9.00		(77)[d]1.00			0.20 pine <0.05 indeterminate wood	
1580C	BLOCK C UNIT: 110S/124W Lev. 7 (80.20)	9.00		3.95[c]			0.20 indeterminate wood	
1172C	BLOCK D UNIT: 114S/108W Lev. 2 (81.00)	9.00	6.50	6.40		1 fern spore	0.15 ring-porous hardwood	
1460C	Lev. 4 (80.80)	9.00	18.85	17.95	(7)	1 fern spore	0.20 ring-porous hardwood 0.15 diffuse-porous hardwood and resin	
1763C	Lev. 6 (80.60)	2.00	26.00	23.75	(3)	2 fern spores	1.25 ring-porous hardwood, pine, and resin 0.70 pine and resin	
2583C	Lev. 8 (80.40)	4.00	8.30	7.60	(8)		0.45 diffuse-porous hardwood and resin	1 indeterminate
3343C	Lev. 10 (80.20)	4.00	1.00	1.35	(7)		(2)[d] cane cambium? (*Arundinaria*) 0.05 ring-porous hardwood	

Table 53. Site 22IT576, Identified macrobotanical remains

SAMPLE			ANALYSIS DATA					
ID	PROVENIENCE	VOLUME (l)	TOTAL FLORA WT.[a] (g)	HICKORY NUT *Carya* spp.[b] (g)	ACORN *Quercus* spp.[b] (g)	SEED	WOOD[c] (g)	OTHER
3790C	Lev. 12 (80.00)	4.00	0.50	~ 0.50	(1)	41 fern spores	(2) diffuse-porous hardwood frags.	
4034C	BLOCK D UNIT: 114S/108W Lev. 14 (79.80)	4.00	<0.05	(4)			(2) indeterminate wood frags.	
4688C	Lev. 16 (79.60)	4.00	0.20	(1)		67 fern spores	(4) indeterminate wood frags.	
775C	FEATURE 5 S½ (80.95↓)	10.00				42 spores (?) *Polygonum* or *Rumex*	(1)[d] bark frag. 3.15 ring-porous and diffuse-porous bark 0.65 ring-porous hardwood and diffuse porous oak (*Quercus*)	
787C	S½ (80.95↓)	6.00		(2)[d] <0.10		5 indeterminate seeds (1 possible Asteraceae) 18 spores 2 indeterminate frags.	0.40 bark 1.10 ring-porous hardwood 6.80 oak (*Quercus*) and modern residue	1 peduncle? 11 poss. Cucurbitaceae rind frags. 1 fruit frag.
1506C	FEATURE 22 BURIAL 3 (80.85↓)	5.00		4.30			0.25 hardwood and modern residue (3) resin or ?	
1572C	(80.78↓)	3.00		(124) 0.40	(1)[d] <0.05		0.10 hardwood 0.10 pine and modern residue	

Table 7.53. Site 22IT576. Identified macrobotanical remains

SAMPLE			ANALYTICAL DATA					
ID	PROVENIENCE	VOLUME (l)	TOTAL FLORA WT.[a] (g)	HICKORY NUT *Carya* spp.[b] (g)	ACORN *Quercus* spp.[b] (g)	SEED	WOOD[c] (g)	OTHER
1586C	FEATURE 23 BURIAL 4 (80.85↘) Seg. A	5.00		3.85	(11) 0.05		0.15 indeterminate wood 0.20 pine	56 pebbles and concretions
1585C	FEATURE 24 N½ (80.70↘)	3.00		(107) 0.65		1 indeterminate seed	0.05 hardwood 0.40 pine	5 concretions
1741C	FEATURE 26 (80.60↘)	2.00		1.30			0.15 ring-porous hardwood (6) ∠0.05 indeterminate wood frags.	4 hickory involucres (*Carya*) or acorn husks (*Quercus*)
2923C	FEATURE 71 S½ (79.95)	8.00	9.30	8.05	(2)	5 fern spores	0.85 ring-porous hardwood and pine	
3044C	FEATURE 74 W½ (80.28↘)	86.00	58.85	55.30	0.35	1 yellow star grass (*Hypoxis*) 1 pokeweed (*Phytolacca*) 10 fern spores 2 indeterminate (eroded) seeds	1.75 ring-porous hardwood and pine	3 indeterminates
3087C	E½ (80.28↘)	90.00	16.80	16.20	(4)		0.15 pine and resin	2 frags. pericarp
3552C	FEATURE 85 S½ (80.04↘)	76.00	31.20	27.60	0.50		1.70 hardwood and pine mixture (2) sm. frag. of cane (*Arundinaria*)	

Table 7.53. Site 22IT576. Identified macrobotanical remains

SAMPLE			ANALYSIS DATA					
ID	PROVENIENCE	VOLUME (1)	TOTAL FLORA WT.[a] (g)	HICKORY NUT *Carya* spp.[b] (g)	ACORN *Quercus* spp.[b] (g)	SEED	WOOD[c] (g)	OTHER
3553C	N½ (80.04↘)	102.00	45.05	41.05	0.55		1.95 hardwood (4) frag. of cane (*Arundinaria*)	6 indeterminate frags.
3732C	FEATURE 98 / S½ (80.04↘)	38.00	6.75	5.30	(10) < 0.05		1.10 diffuse-porous hardwood	
3733C	N½ (80.04↘)	45.00	6.65	2.90	0.20		0.50 hardwood	1 indeterminate
3966C	FEATURE 98 / S½ (79.90↘)	9.00	0.65	0.65			< 0.05 hardwood	
3965C	N½ (79.90↘)	12.00	0.50	0.55			0.10 indeterminate wood	
3996C	FEATURE 111 / S½ (79.90↘)	54.00	31.10	27.0	0.25		1.60 hardwood	1 indeterminate
3997C	N½ (79.90↘)	92.00	8.60	7.40	0.10		0.40 hardwood	1 indeterminate

[a]Total carbonized botanical weight.

[b]All the carbonized botanical remains under the acorn and hickory columns are pericarp fragments unless otherwise specified.

[c]Mixed with some modern detritus.

[d]Numbers inside parenthesis under columns (whose weight is denoted by grams) indicate actual botanical count.

[e]Material listed under the wood column is not the actual total of wood recovered; it is mixed with other materials.

Table 7.53. Site 22IT576. Identified macrobotanical remains

Table 7.54. Site 22IT576. Inventory of Faunal Remains.

Mammals

Opossum, *Didelphis marsupialis*

Eastern Cottontail, *Sylvilagus floridanus*

Squirrel, *Sciurus sp.*

Canid, *Canis sp.*

Raccoon, *Procyon lotor*

White-tailed Deer, *Odocoileus virginianus*

Antler, *Cervidae*

Human, *Homo sapien*

Indeterminate mammal bone

Birds

Green Heron, *Butorides virescens*

Hawk sp.

Passerine sp.

Indeterminate bird bone

Reptiles

Mud/Musk Turtle, *Kinosternidae*

Box Turtle, *Terrapene carolina*

Painted/Map/Slider Turtle, *Graptemys/Chrysemys/Pseudemys*

Softshell Turtle, *Trionyx sp.*

Turtle sp.

Nonpoisonous Snake, *Colubridae*

Snake sp.

Fish

Drum, *Aplodinotus grunniens*

Indeterminate fish bone

	FAUNA	FROM TO	81.23-81.20	81.20-81.10	81.10-81.00	81.00-80.90	80.90-80.80	80.80-80.70	80.70-80.60	80.60-80.50	80.50-80.40	80.40-80.30	80.30-80.20	80.20-80.10	80.10-80.00	80.00-79.90	79.90-79.80	TOTAL
BLOCK A	Indeterminate Mammal Bone						5		2	2	5							12
BLOCK B	Rabbit						1											1
	Indeterminate Mammal Bone						1	3	5	12	1							22
BLOCK C	Indeterminate Mammal Bone					2			5	1		2	3	2				15
TEST PIT [illegible] 112	Deer												1					2
	Indeterminate Mammal Bone					1		7			20		11	1				40
	Indeterminate Bird Bone													1				1
TEST PIT 1195 [illegible] 113	Indeterminate Mammal Bone					2					1	1	1	2				7
	Indeterminate Bird Bone											1						1

Column group heading: METERS ABOVE SEA LEVEL ELEVATION

Table 7.55. Site 22IT576. Distribution of faunal remians in Blocks A, B, C and test pits.

FAUNA	FROM TO	81.23- 81.20	81.20- 81.10	81.10- 81.00	81.00- 80.90	80.90- 80.80	80.80- 80.70	80.70- 80.60	80.60- 80.50	80.50- 80.40	80.40- 80.30	80.30- 80.20	80.20- 80.10	80.10- 80.00	80.00- 79.90	79.90- 79.80	TOTAL
		METERS ABOVE SEA LEVEL ELEVATION															
Human		1(?)		1	143 (14(?))	9 (17)		67(?)	49(?)								270 (259?)
Canid									1								1
Deer		8	7	11	2	5	5	2	1								41
Deer Antler								1									1
Eastern Cottontail						1											1
Rabbit			1														1
Raccoon								2									2
Opossum				1													1
Indeterminate Mammal Bone		351	637	869	557	603	304	204	66	12	7	12	11	7	3	4	3647
Green Heron		1															1
Hawk sp.		1		1	1	1											4
Indeterminate Bird Bone		5	4	16	7	6	2		2								42
Snake				1													1
Box Turtle			3	10	6	16	8	3	3				1	1			51
Mud/Musk Turtle					1												1
Painted/Map/Slider Turtle					1		1	5									7
Softshell Turtle		1					1	1									3
Turtle sp.		9	14	29	12	25	15	19	5	1	1	1		3			134
Drum			1														1
Indeterminate Fish Bone			1														1
Fossil Shell				1													1
	TOTALS	377	668	940	730	666	336	304	127	13	8	13	12	11	3	4	4212

Table 7.56. Site 22IT576. Distribution of faunal remains in Block D.

										BURIALS						BURIAL 19	BURIAL 5		
FAUNA	FEATURES	4	5	9	14	15	16	18	21	22	24	26	27	28	29	31	33	34	38	TOTAL
Human								2					3							5
Deer						1							1						1	3
Deer - Antler				1																1
Rabbit																	1			1
Squirrel													1				6			7
Indeterminate Mammal Bone		6	28	1	6	8	5	1	3	198	94	15	121	1	3	29	16	1		536
Passerine sp.			1																	1
Indeterminate Bird Bone										3	1		7				3			14
Non-poisonous Snake			10										2							12
Snake			34										1				1			36
Box Turtle																1				1
Turtle											2		10			2				14
Indeterminate Fish Bone			1										5				1			7
Gastropod			1																	1
Shell			1																	1
	TOTALS	6	76	2	6	9	5	3	3	201	97	15	151	1	3	32	28	1	1	640

Talbe 7.57. Site 22IT576. Distribution of faunal remains in features and burials.

Table 7.58. Site 22IT5/6. Component Summary.

COMPONENT	DATES B.P.	INTACT MIDDEN	INTACT FEATURES	PRESENT BUT DISTURBED
Early Archaic, Kirk Horizon	9500-8500	Yes	Yes	
Initial Middle Archaic, Eva/ Morrow Mountain Horizon	7800-6500	Yes	Yes	
Terminal Middle Archaic, Sykes-White Springs and Initial Late Archaic, Benton Horizon	6500-5400	Yes	Yes	
Late Archaic, Pickwick Horizon	5400-4500	No	No	Yes
Late Archaic, Little Bear Creek Horizon	4500-3000	No	No	Yes
Middle Gulf Formational, Wheeler Horizon	3000-2600	No	Yes	
Late Gulf Formational, Alexander Horizon	2600-2200	No	Yes	
Middle Woodland, Miller I & II Horizons	2200-1400	No	No	Yes
Late Woodland, Miller III Horizon	1400-900	No	Yes	Yes
Early Mississippian, Moundville I Horizon	900-750	No	No	Yes

ELEVATION METERS ABOVE SEA LEVEL	81.23-81.20	81.20-81.10	81.10-81.00	81.00-80.90	80.90-80.80	80.80-80.70	80.70-80.60	80.60-80.50	80.50-80.40	80.40-80.30	80.30-80.20	80.20-80.10	80.10-80.00	80.00-79.90	79.90-79.80	79.80-79.70	79.70-79.60	79.60-79.50	TOTAL
HISS /WOODLAND TRIANGULAR				4															4
GARY				2	1														3
LEDBETTER-PICKWICK					1						1								2
LITTLE BEAR CREEK /FLINT CREEK				6	4	1													11
RESIDUAL STEMMED				6			2				1	1							10
McINTIRE				4					1										5
BENTON									1	1	1	1							4
SYKES-WHITE SPRINGS									1				1						2
EVA													2						2
MORROW MOUNTAIN											1								1
CYPRESS CREEK					1														1
KIRK CORNER NOTCHED				1			2				1								4
																		TOTAL	49

Table 7.59. Site 22IT576. Distribution of Projectile Point/Knives in Block A.

ELEVATION METERS ABOVE SEA LEVEL	81.23-81.20	81.20-81.10	81.10-81.00	81.00-80.90	80.90-80.80	80.80-80.70	80.70-80.60	80.60-80.50	80.50-80.40	80.40-80.30	80.30-80.20	80.20-80.10	80.10-80.00	80.00-79.90	79.90-79.80	79.80-79.70	79.70-79.60	79.60-79.50	TOTAL
TOMBIGBEE STEMMED					1														1
LEDBETTER-PICKWICK					1	1		1											3
LITTLE BEAR CREEK /FLINT CREEK					5	3	4	2											14
RESIDUAL STEMMED					3			2		1									6
McINTIRE					1														1
BENTON									2										2
SYKES-WHITE SPRINGS					1		1					1							3
EVA													1						1
MORROW MOUNTAIN								1			1								2
KIRK CORNER NOTCHED													1						1
																		TOTAL	34

Table 7.60. Site 22IT576. Distribution of Projectile Point/Knives in Block B.

ELEVATION METERS ABOVE SEA LEVEL	81.23-81.20	81.20-81.10	81.10-81.00	81.00-80.90	80.90-80.80	80.80-80.70	80.70-80.60	80.60-80.50	80.50-80.40	80.40-80.30	80.30-80.20	80.20-80.10	80.10-80.00	80.00-79.90	79.90-79.80	79.80-79.70	79.70-79.60	79.60-79.50	TOTAL
MISS./MADISON AND TRIANGULAR						1	1												2
FLORA														1					1
LEDBETTER-PICKWICK								1											1
LITTLE BEAR CREEK /FLINT CREEK							1	2	3		1	1							8
RESIDUAL STEMMED						1	3			1		1	1						7
McINTIRE							1												1
SAVANNAH RIVER						2													2
BENTON								1	2			1							4
SYKES-WHITE SPRINGS						1													1
EVA						2					1		1						4
MORROW MOUNTAIN											1								1
KIRK CORNER NOTCHED						1		1											2
																		TOTAL	34

Table 7.61. Site 22IT576. Distribution of Projectile Point/Knives in Block C.

ELEVATION METERS ABOVE SEA LEVEL	81.23-81.20	81.20-81.10	81.10-81.00	81.00-80.90	80.90-80.80	80.80-80.70	80.70-80.60	80.60-80.50	80.50-80.40	80.40-80.30	80.30-80.20	80.20-80.10	80.10-80.00	80.00-79.90	79.90-79.80	79.80-79.70	79.70-79.60	79.60-79.50	TOTAL
COLLINS	1																		1
MISS/WOODLAND TRIANGULAR	27	30	37	14	9	7	7		1	2	1								135
BRADLEY SPIKE				1			1												2
FLINT RIVER SPIKE				1															1
MUD CREEK			1																1
SWAN LAKE			2																2
BIG SLOUGH			1																1
COTACO CREEK				1				1											2
FLORA				1					1										2
LEDBETTER-PICKWICK	1	2	1	2				1											7
LIMESTONE	1				1														2
LITTLE BEAR CREEK /FLINT CREEK	12	34	28	20	16	16	13	5	2	2	1								149
RESIDUAL STEMMED	5	9	5	5	6	5	5		2	2	2	1							47
McINTIRE		1	1	2	1		1			1		1							8
SAVANNAH RIVER							1												1
BENTON		4		1	3		4	9	4	11	2								38
SYKES-WHITE SPRINGS		3	3	1	1	1	1	2	3		4	1	1						21
EVA			3				2	1		1	4	4		1					16
MORROW MOUNTAIN		1		1		1			2		3	2							10
RESIDUAL TRIANGULAR											2	2							4
CYPRESS CREEK											1								1
VAUGHN		1				2													3
BIG SANDY SIDE NOTCHED																	1	1	2
DALTON		1																	1
GREENBRIER									1								1		2
KIRK CORNER NOTCHED		1		2		3	2		2				2			2	2	3	19
																		TOTAL	477

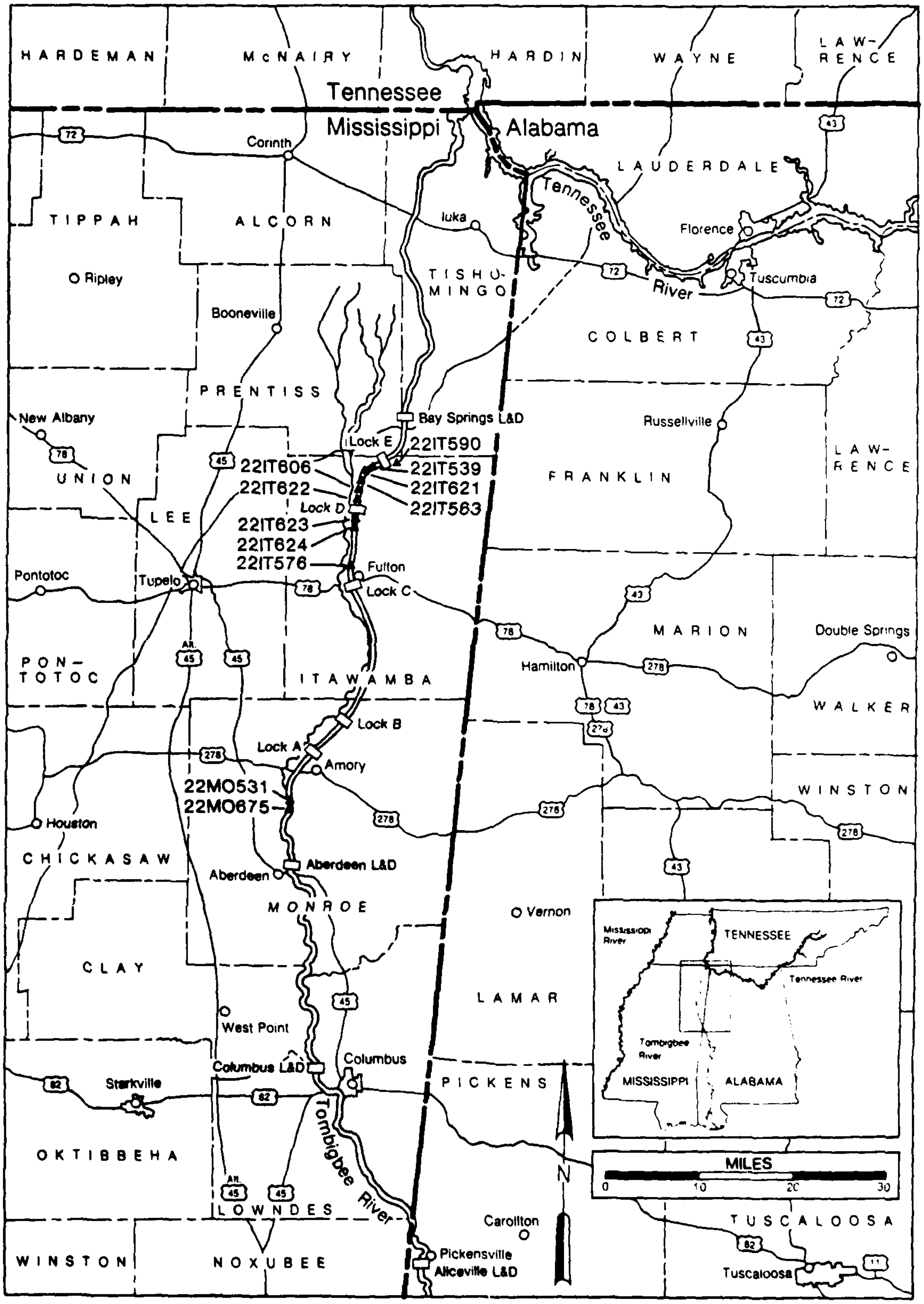
Table 7.62. Site 22IT576. Distribution of Projectile Point/Knives in Block D.

ELEVATION METERS ABOVE SEA LEVEL	81.23-81.20	81.20-81.10	81.10-81.00	81.00-80.90	80.90-80.80	80.80-80.70	80.70-80.60	80.60-80.50	80.50-80.40	80.40-80.30	80.30-80.20	80.20-80.10	80.10-80.00	80.00-79.90	79.90-79.80	79.80-79.70	79.70-79.60	79.60-79.50	TOTAL
COLLINS	1(2)																		1
MISS./WOODLAND TRIANGULAR	27 (55.1)	30 (34.4)	36 (43.9)	18 (23.7)	9 (15.5)	8 (16)	8 (15.1)		1 (3.4)	2 (8.7)	1 (3.6)								140
SMALL TRIANGULAR UNFINISHED	2(4.1)		1(1.2)	1(1.3)	2(3.4)	2(4)	1(1.9)		1(3.4)	1(4.3)									11
BRADLEY SPIKE				1(1.3)			1(1.9)												.2
FLINT RIVER SPIKE				1(1.3)															1
MUD CREEK			1(1.2)																1
SWAN LAKE			2(2.4)																2
TOMBIGBEE STEMMED					1(1.7)														1
BIG SLOUGH			1(1.2)																1
COTACO CREEK				1(1.3)				1(3.3)											2
ELORA				1(1.3)					1(3.4)					1(33.3)					3
GARY				2(2.6)	1(1.7)														3
LEDBETTER-PICKWICK	1(2)	2(2.3)	1(1.2)	2(2.6)	2(3.4)	1(2)		3(10)			1 (3.6)								13
LIMESTONE	1(2)				1(1.7)														2
LITTLE BEAR CREEK /FLINT CREEK	12 (24.4)	34 (39.1)	28 (34.1)	26 (34.2)	25 (43.1)	20 (40)	18 (34)	9 (30)	5 (17.2)	2 (8.7)	2 (7.1)	1 (5.5)							182
RESIDUAL STEMMED	5 (10.2)	9 (10.3)	5 (6.1)	11 (14.5)	9 (15.5)	6 (12)	10 (18.9)	2 (6.7)	2 (6.9)	4 (17.4)	3 (10.7)	3 (16.7)	1 (11.1)						70
McINTIRE		1(1.1)	1(1.2)	6(7.9)	2(3.4)		2(3.8)		1(3.4)	1(4.3)		1(5.5)							15
SAVANNAH RIVER						2(4)	1(1.9)												3
BENTON		4 (4.6)		1 (1.3)	3 (5.2)		4 (7.5)	10 (33.3)	9 (31.0)	12 (52.2)	3 (10.7)	2 (11.1)							48
SYKES-WHITE SPRINGS		3 (3.4)	3 (3.6)	1 (1.3)	2 (3.4)	2 (4)	2 (3.8)	2 (6.7)	4 (13.8)		4 (14.3)	2 (11.1)	2 (22.2)						27
EVA			3 (3.6)			2 (4)	2 (3.8)	1 (3.3)		1 (4.3)	4 (14.3)	5 (27.8)	3 (33.3)	2 (66.7)					23
MORROW MOUNTAIN		1 (1.1)		1 (1.3)		1 (2)		1 (3.3)	2 (6.9)		6 (21.4)	2 (11.1)							14
RESIDUAL TRIANGULAR											2 (7.1)	2(11.1)							4
CYPRESS CREEK					1(1.7)						1 (3.6)								2
VAUGHN		1(1.1)				2(4)													3
BIG SANDY SIDE NOTCHED																	1(25)	1(25)	2
DALTON		1(1.1)																	1
GREENBRIER									1(3.4)								1(25)		2
KIRK CORNER NOTCHED		1 (1.1)		3 (3.9)		4 (8)	4 (7.5)	1 (3.3)	2 (6.9)		1 (3.6)		3 (33.3)			2 (100)	2 (50)	3 (75)	26
TOTALS	49	87	82	76	58	50	53	30	29	23	28	18	9	3	0	2	4	4	605

Table 7.63. Site 22IT576. Summary of Projectile Point/Knives by Elevation

Figure 7.1

Site 22IT576: Location map



Tennessee
Mississippi
Alabama
HARDEMAN
McNAIRY
HARDIN
WAYNE
LAW-RENCE
TIPPAH
ALCORN
TISHOMINGO
LAUDERDALE
COLBERT
Corinth
Iuka
Florence
Tuscumbia
Tennessee River
Ripley
Booneville
PRENTISS
New Albany
UNION
LEE
Bay Springs L&D
Lock E
22IT590
22IT539
22IT621
22IT563
22IT606
22IT622
Lock D
22IT623
22IT624
22IT576
Fulton
Lock C
Russellville
FRANKLIN
LAW-RENCE
Pontotoc
Tupelo
PONTOTOC
ITAWAMBA
MARION
Hamilton
Double Springs
WALKER
Lock B
Lock A
Amory
22MO531
22MO675
Houston
CHICKASAW
WINSTON
Aberdeen L&D
Aberdeen
MONROE
Vernon
CLAY
LAMAR
West Point
Columbus L&D
Columbus
Starkville
PICKENS
OKTIBBEHA
Tombigbee River
LOWNDES
Carollton
TUSCALOOSA
WINSTON
NOXUBEE
Pickensville
Aliceville L&D
Tuscaloosa
N
MILES
0 10 20 30
Mississippi River
TENNESSEE
Tennessee River
Tombigbee River
MISSISSIPPI
ALABAMA

1. 192

Figure 7.2

Site 22IT576: Topographic map and excavation plan

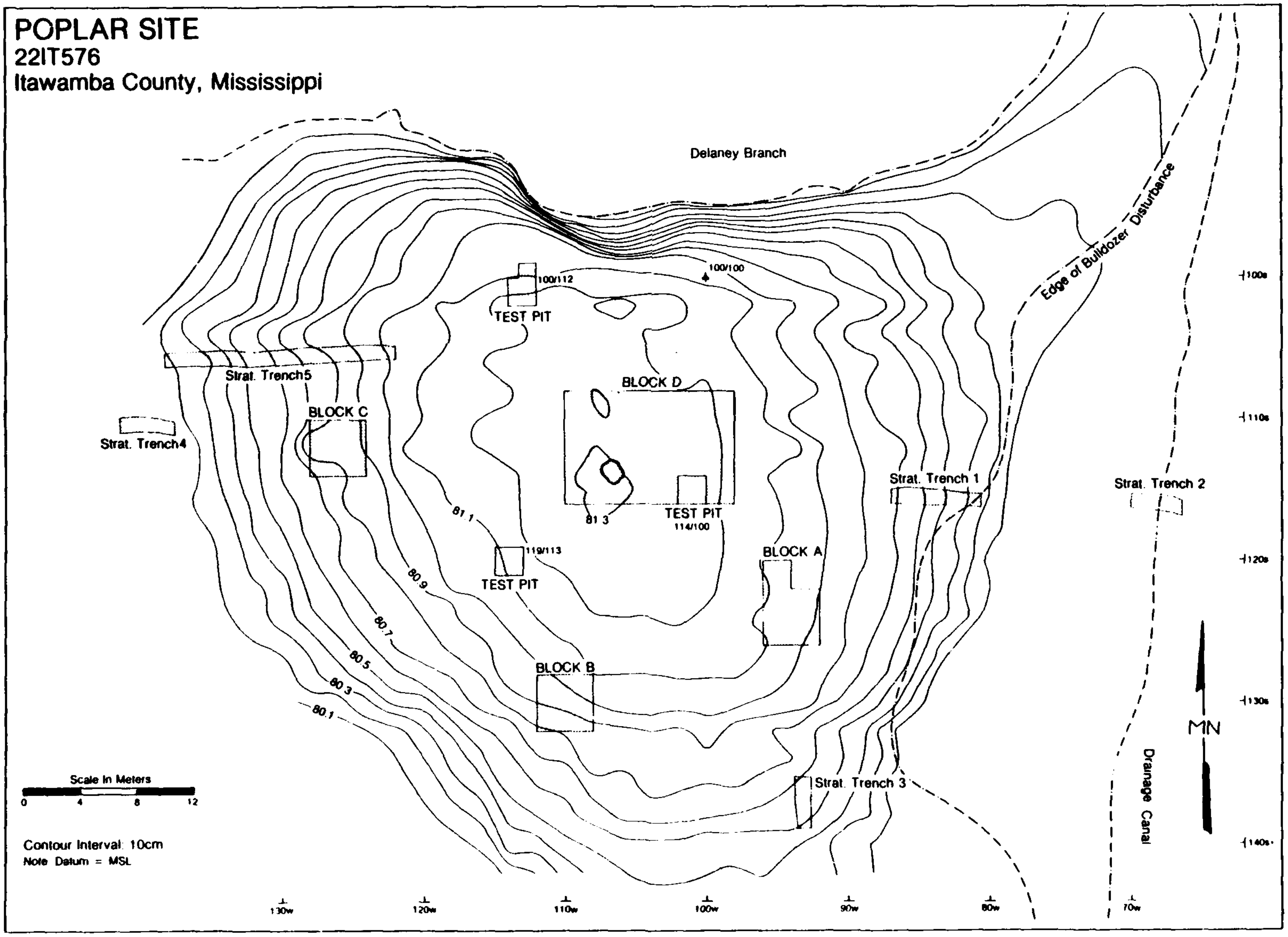

POPLAR SITE
22IT576
Itawamba County, Mississippi
Delaney Branch
Edge of Bulldozer Disturbance
100/100
100/112
TEST PIT
Strat. Trench5
BLOCK D
BLOCK C
Strat. Trench4
Strat. Trench 1
Strat. Trench 2
81 1
81 3
TEST PIT
114/100
119/113
TEST PIT
BLOCK A
80.9
80.7
80.5
80.3
80.1
BLOCK B
Strat. Trench 3
Drainage Canal
MN
100s
110s
120s
130s
140s
130w
120w
110w
100w
90w
80w
70w
Scale in Meters
0
4
8
12
Contour Interval: 10cm
Note Datum = MSL

Figure 7.3

Site 22IT576: General view of the site prior to excavation, late Winter 1980, looking west across drainage ditch

Figure 7.4

Site 22IT576: General view of the site, during drought of Summer 1980, looking west across drainage ditch

7.196

Figure 7.5

Site 22IT576: General view of site during March 1980 flood, looking west across drainage ditch, water-screen station to right in background

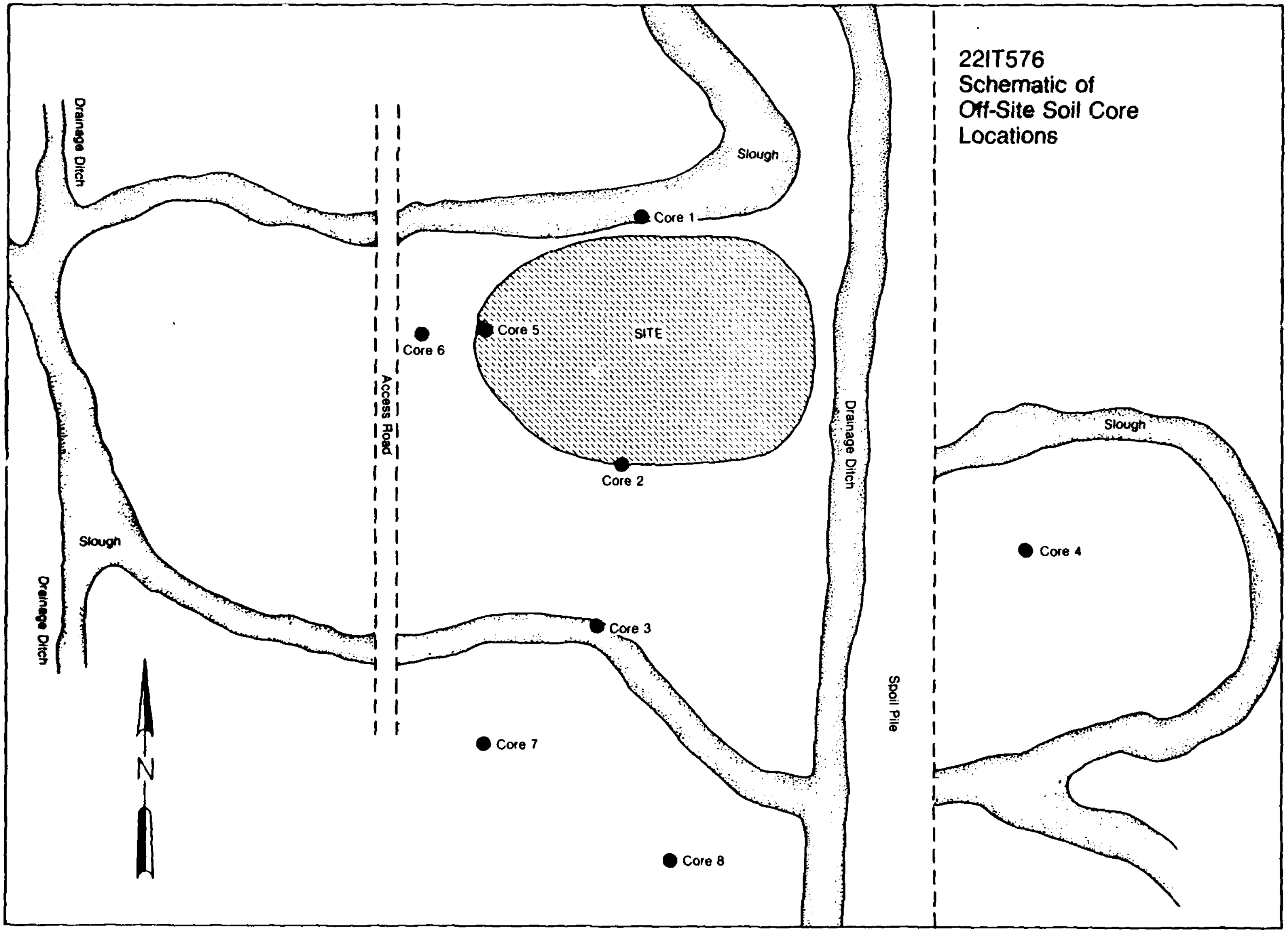
Figure 7.6

Site 22IT576: Flooded Block C, during March 1980 flood

7.19ε

Figure 7.7

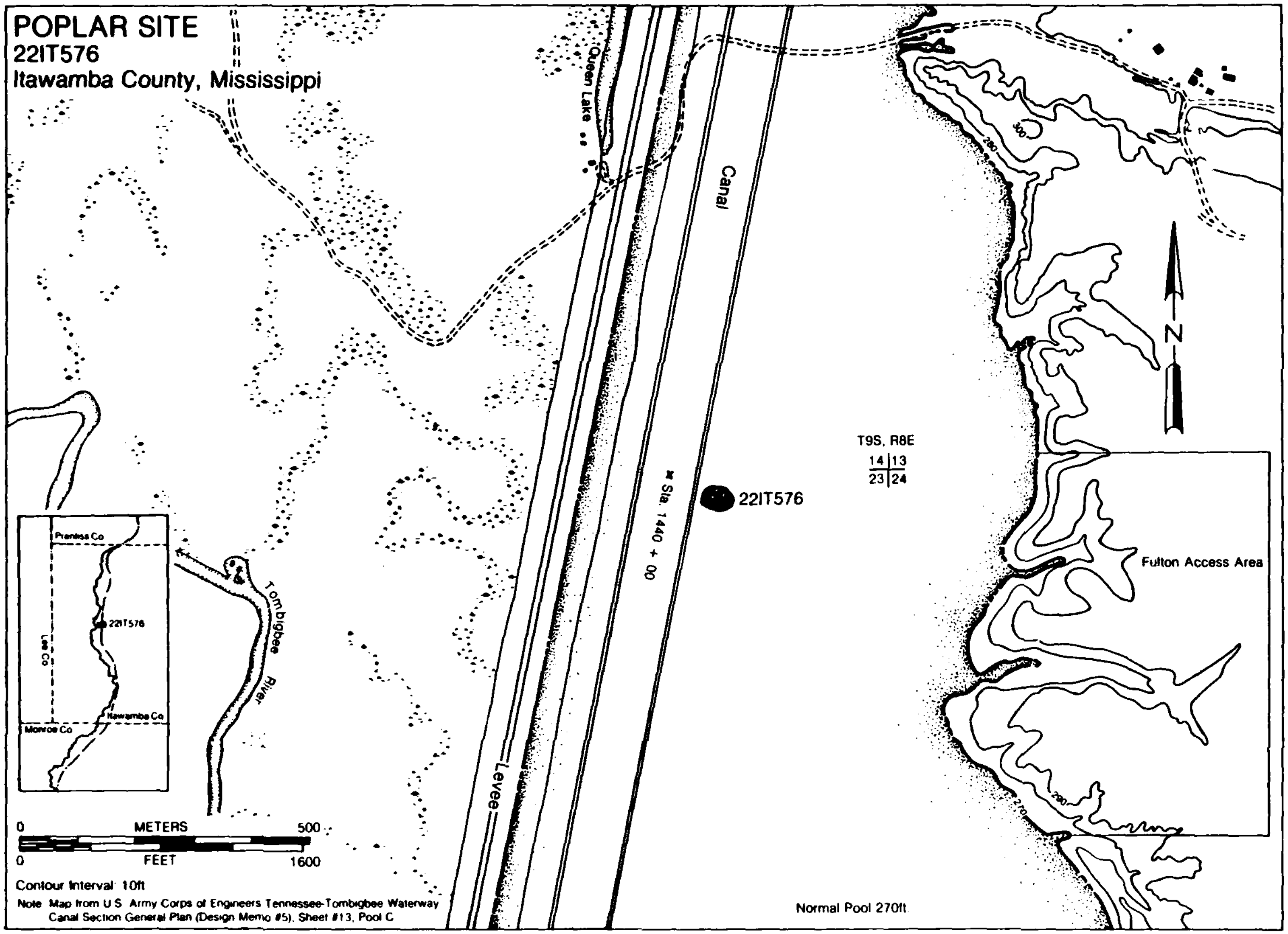
Site 22IT576: Schematic of site area and off-site soil care locations


22IT576
Schematic of
Off-Site Soil Core
Locations
Slough
Core 1
SITE
Core 5
Core 6
Core 2
Access Road
Drainage Ditch
Spoil Pile
Slough
Core 4
Slough
Core 3
Core 7
Core 8
Drainage Ditch
Drainage Ditch
N

7. 200

Figure 7.8

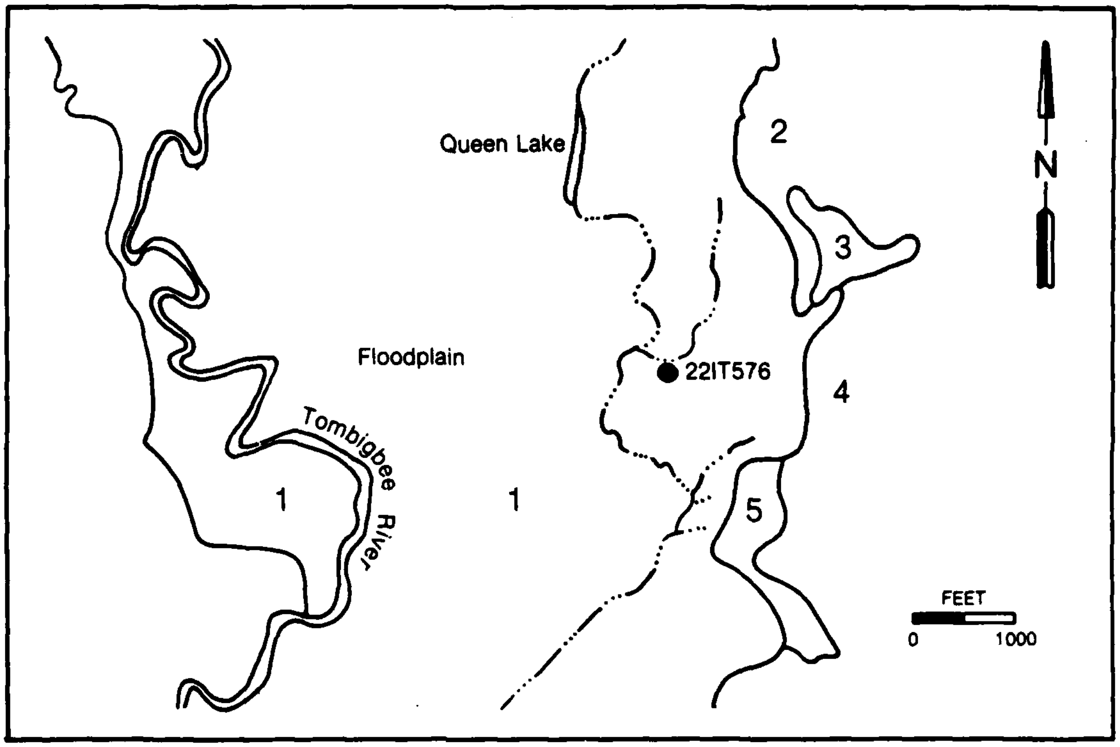
Site 22IT576: Waterway location map


POPLAR SITE
22IT576
Itawamba County, Mississippi
Queen Lake
Canal
Levee
Sta. 1440 + 00
22IT576
T9S, R8E
14 | 13
23 | 24
N
Fulton Access Area
300
280
270
Tombigbee River
Prentiss Co
Lee Co
Itawamba Co
Monroe Co
22IT576
0 METERS 500
0 FEET 1600
Contour Interval: 10ft
Note: Map from U.S. Army Corps of Engineers Tennessee-Tombigbee Waterway Canal Section General Plan (Design Memo #5), Sheet #13, Pool C
Normal Pool 270ft

7.202

Figure 7.9

Site 22IT576: Soil map of site and vicinity



SOIL LEGEND

SYMBOL	NAME
1	Kirkville-Mantachie Association
2	Luverne fine sandy loam, 12 to 25 percent slopes
3	Ora fine sandy loam, 5 to 8 percent slopes, eroded
4	Smithdale Association, hilly
5	Harleston fine sandy loam

Figure 7.10

Site 22IT576: Profile of Block D, west wall

Figure 7.11

Site 22It576: Profile of Block D, south wall, western section

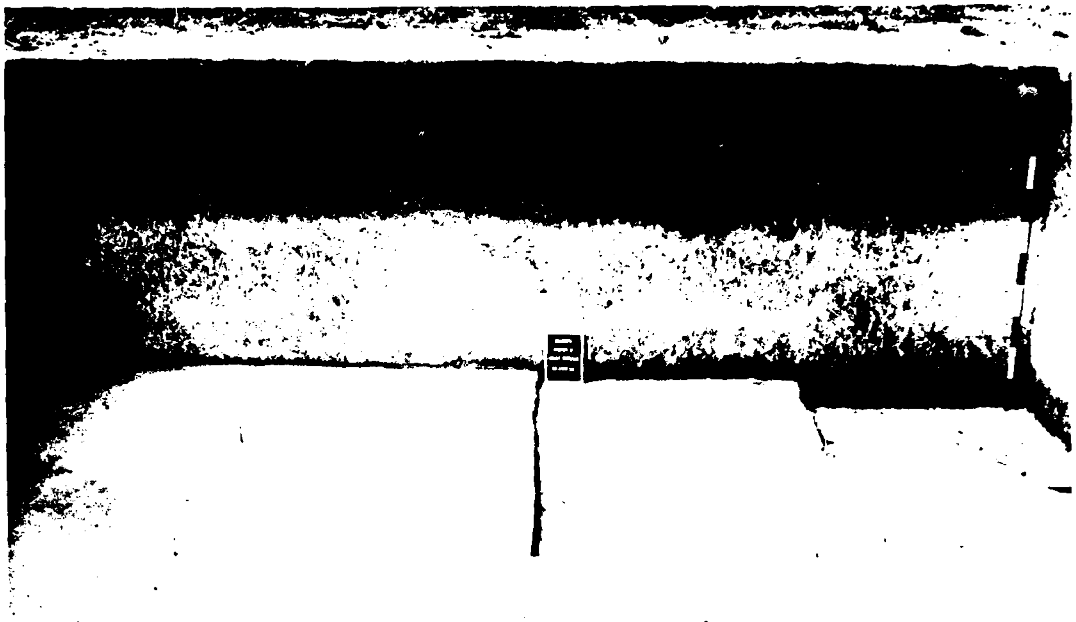


Figure 7.12

Site 22IT576: Floor of Block B, Levels 12 and 14, exhibiting polygonal soil development (Zone VI)

Figure 7.13

Site 22IT576: Profile of Block A, north wall

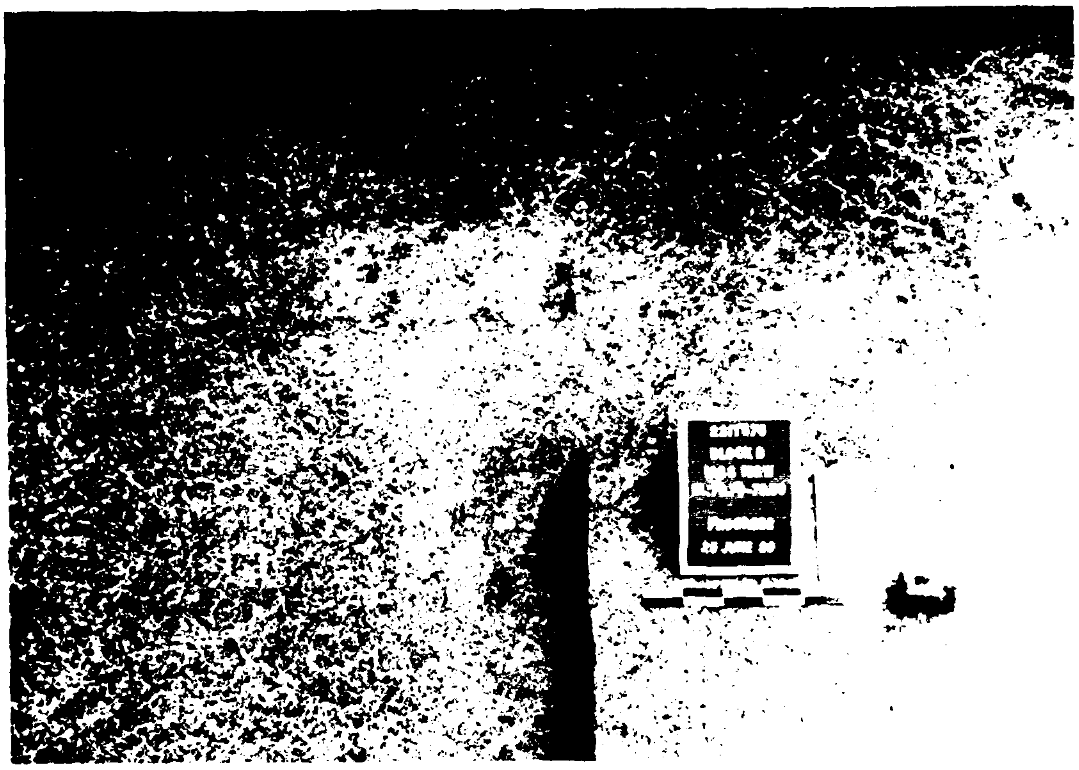
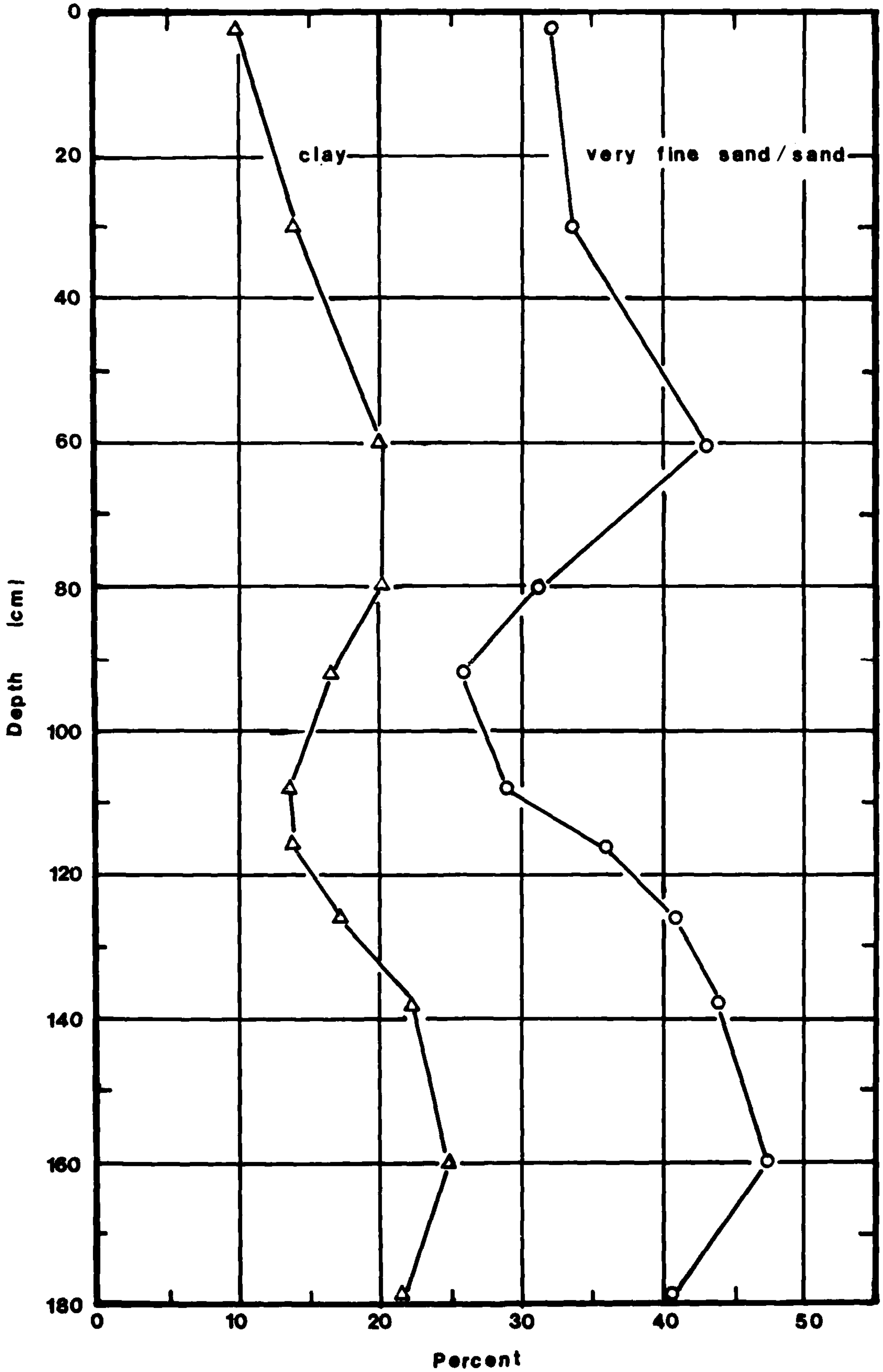


Figure 7.14

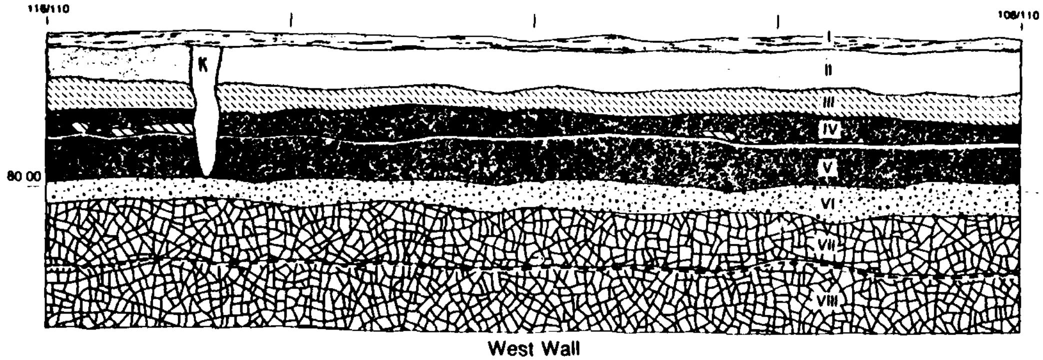
Site 22IT576: Constant sand fabric of representative pedon



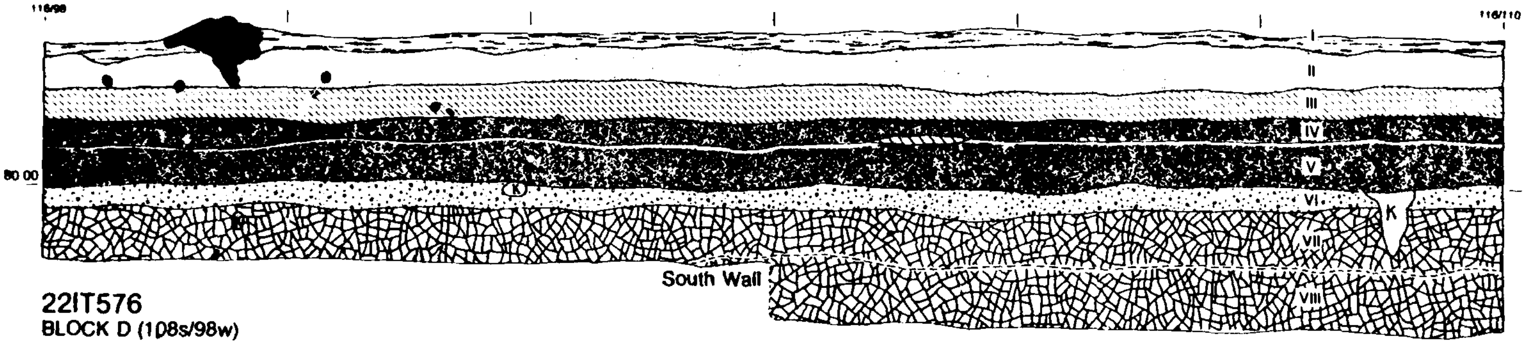
0
20
40
60
80
100
120
140
160
180
Depth (cm)
0
10
20
30
40
50
Percent
clay
very fine sand / sand

Figure 7.15

Site 22IT576: Profiles of Block D, north and west wall



West Wall



South Wall

22IT576
BLOCK D (108s/98w)

I. Dark reddish brown (5YR 3/2 - 3/3) loam (Plowzone).
II. Dark reddish brown (5YR 2.5/2 - 3/2) loam, few small charcoal fragments.
III. Dark reddish brown (5YR 3/3 - 3/2) loam, common small charcoal fragments.
IV. Dark reddisn brown (5YR 3/2) loam to sandy loam, common to abundant multi-sized charcoal fragments.
V. Reddish brown (5YR 4/4) and strong brown (7.5YR 5/6) sandy loam to strong brown (7.5YR 5/6) and dark brown (7/5YR 4/4) loam, few fine charcoal fragments, few fine black concretions.
VI. Dark yellowish brown (10YR 4/4) loam with strong brown (7.5YR 4/6), dark brown (7.5YR 3/4) and yellowish red (5YR 5/8) mottles, polygonal development, common ferro-manganese concretions.
VII. Mottled pale brown (10YR 6/3), brownish yellow (10YR 6/8), strong brown (7.5YR 5/8), yellowish red (5YR 5/8) and red (2/5YR 4/8) loam, polygonal structure, common ferro-manganese concretions.
VIII. Mottled yellowish brown (10YR 5/6), pale brown (10YR 6/3), olive yellow (2.5YR 6/8), brownish yellow (10YR 6/8) and reddish yellow (7.5YR 6/6) loam, polygonal structure, few ferro-manganese concretions.

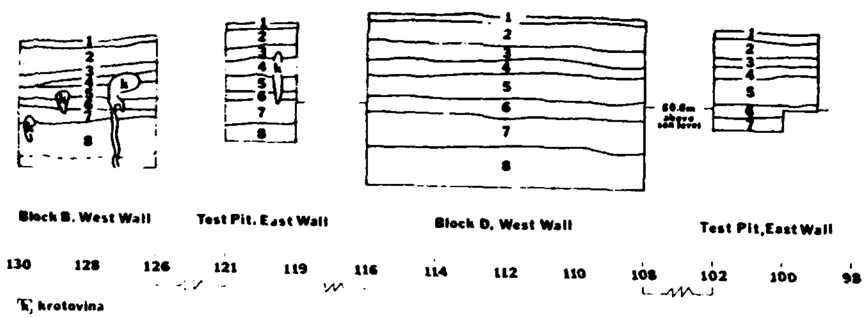
K Krotovina
Fired Aggregate
Roots

cm
0 40 80 120

Figure 7.16

Site 22IT576: Composite stratigraphic cross-sections

22It576 North/South Cross-Section



22It576 East/West Cross-Section

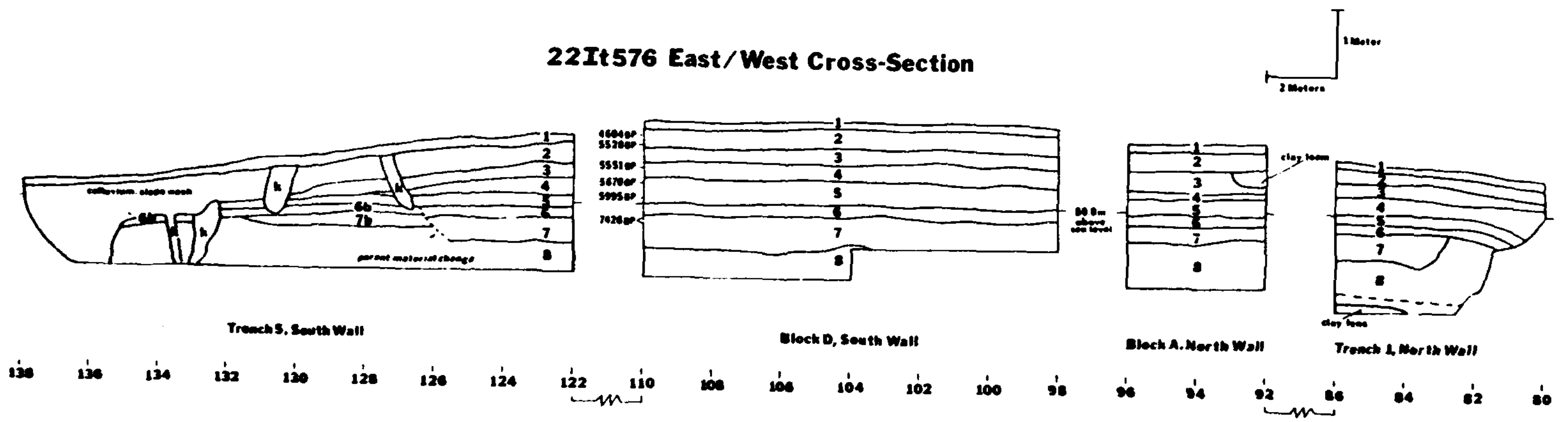


Figure 7.17

Site 22IT576: Distribution of chipped stone cluster features

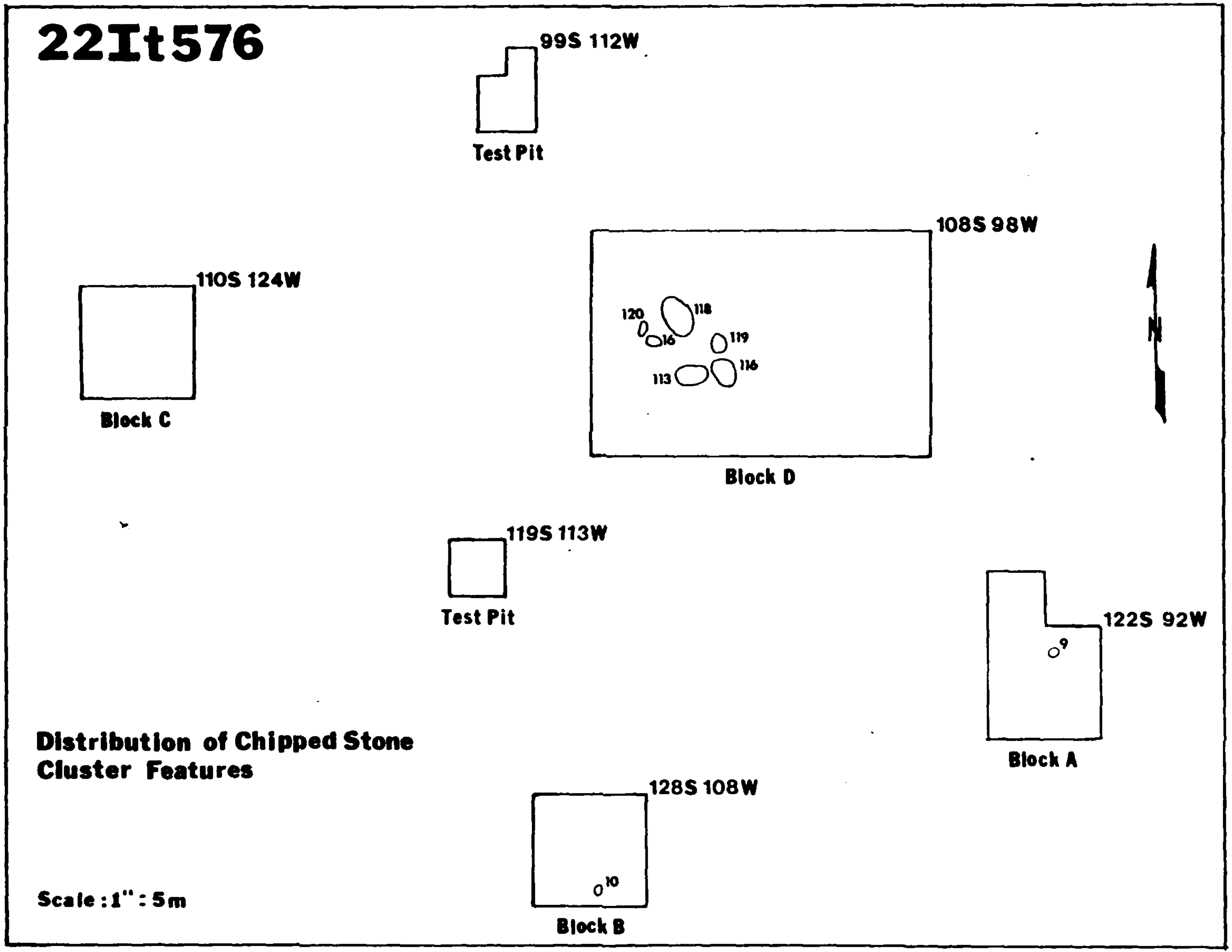
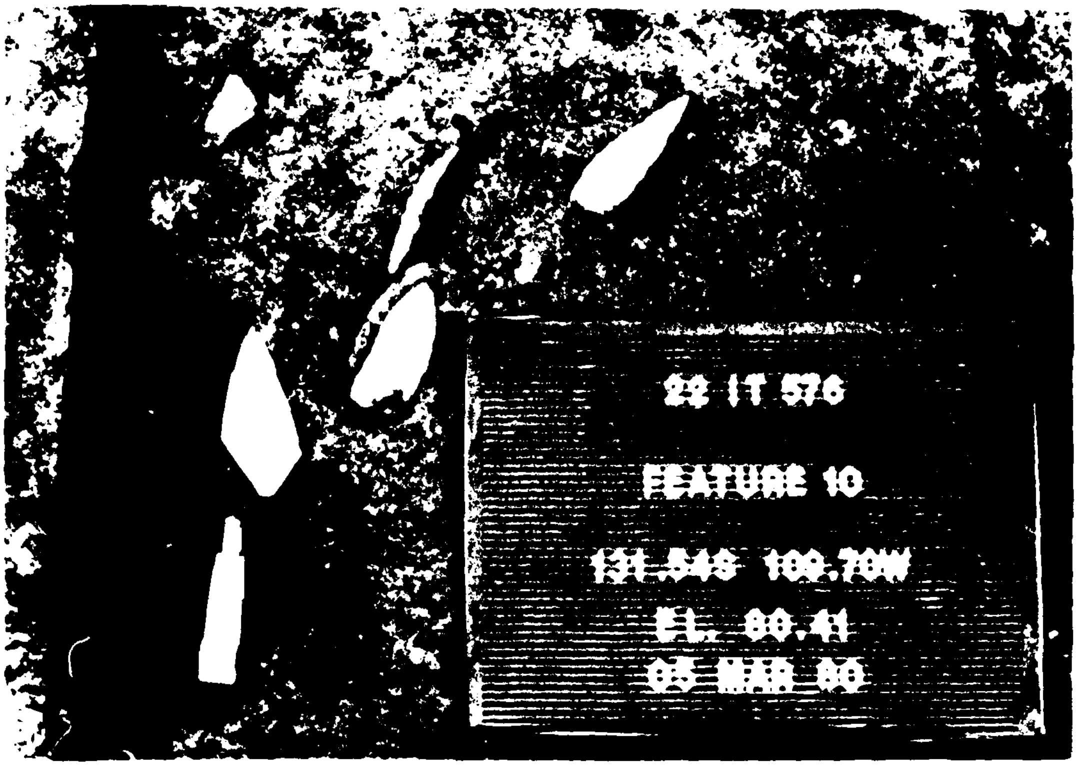

22It576
99S 112W
Test Pit
108S 98W
110S 124W
Block C
120
118
16
119
113
116
Block D
N
119S 113W
Test Pit
122S 92W
9
Block A
128S 108W
10
Block B
Distribution of Chipped Stone
Cluster Features
Scale : 1" : 5m

Figure 7.18

Site 22IT576: Feature 10. Blade cache

Figure 7.19

Site 22IT576: Feature 9. Chipped stone cluster


22 IT 576
FEATURE 10
131.54S 109.70W
EL. 80.41
05 MAR 80

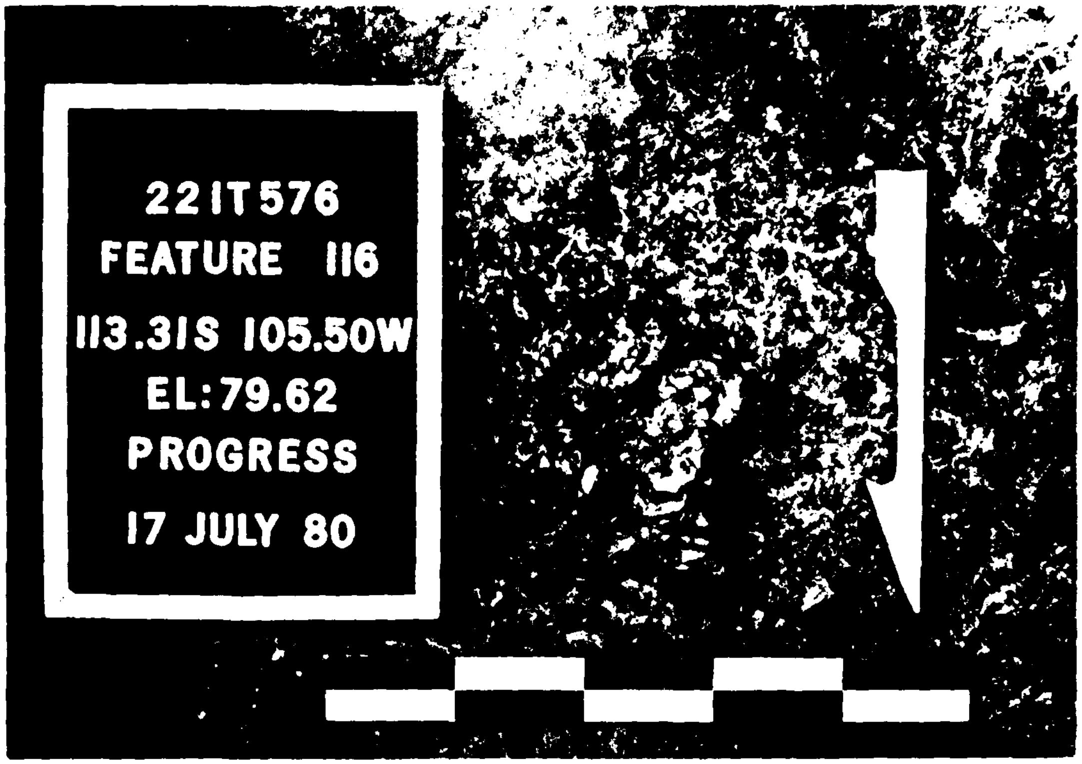

22IT576
FEATURE 9
124.10 S 93.65 W
EL. 80.60
9 APR 80

Figure 7.20

Site 22IT576: Feature 116. Early Archaic chipped stone cluster

Figure 7.21

Site 22IT576: Feature 118. Early Archaic chipped stone cluster


22IT576
FEATURE 116
113.31S 105.50W
EL:79.62
PROGRESS
17 JULY 80

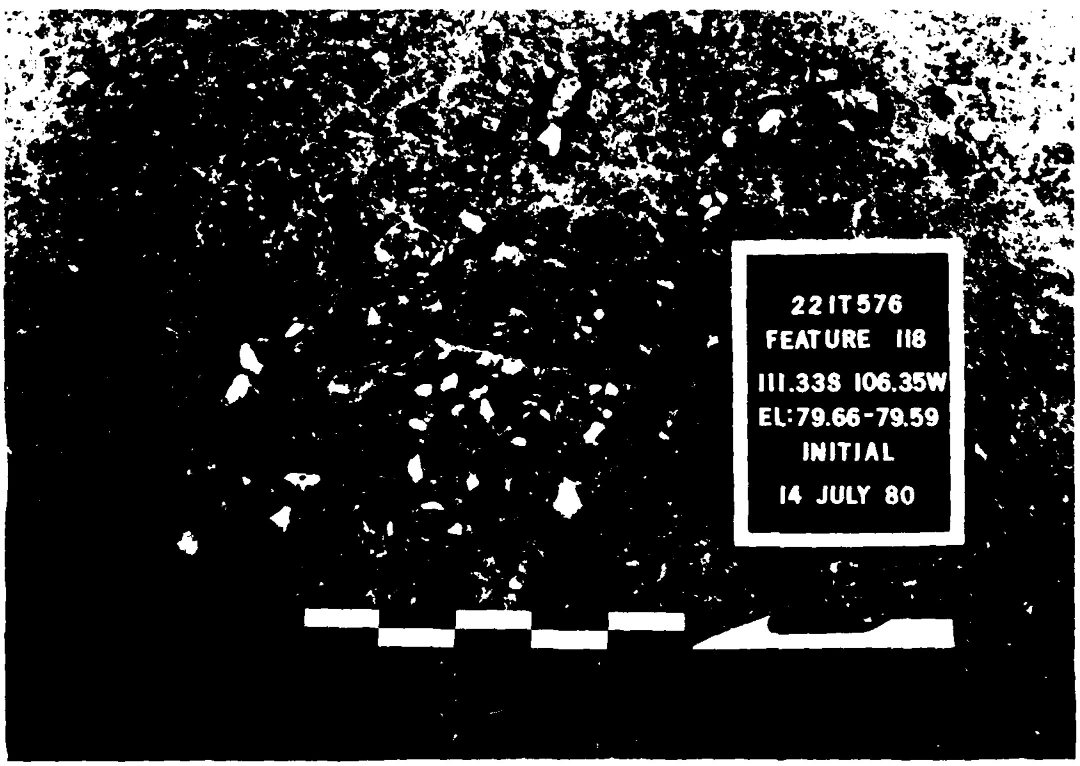
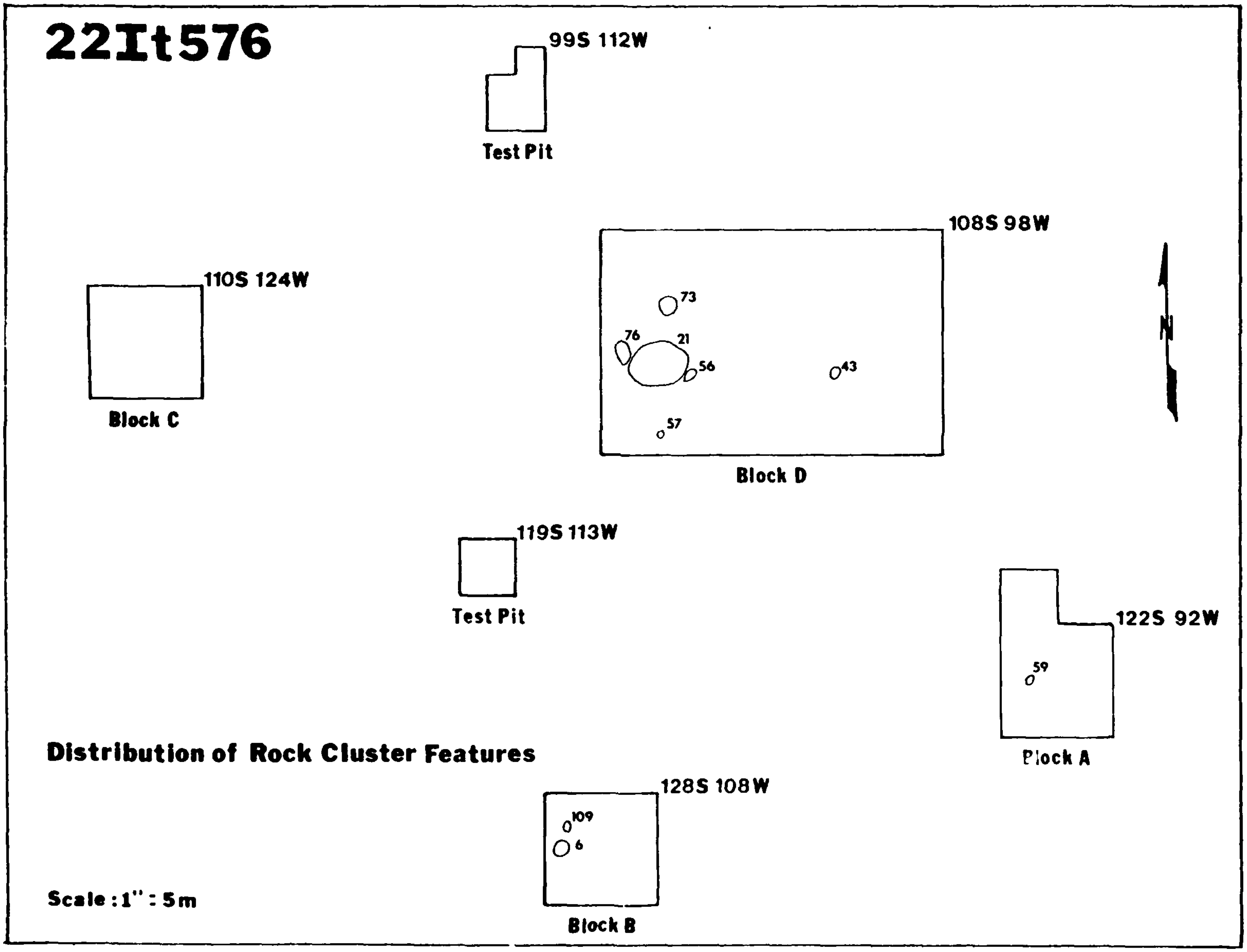

22IT576
FEATURE 118
111.33S 106.35W
EL:79.66-79.59
INITIAL
14 JULY 80

Figure 7.22

Site 22IT576: Distribution of rock cluster features



Distribution of Rock Cluster Features

Figure 7.23

Site 22IT576: Feature 59. Rock cluster

Figure 7.24

Site 22IT576: Feature 73. Rock cluster. Depression in center is from prior excavation of Feature 23. Note fired clay.

22IT576
BLOCK A
FEATURE 59
124.20 S - 94.96 W
EL: 80.28
INITIAL
14 MAY 80

INITIAL

Figure 7.25

Site 22IT576: Distribution of fired aggregate, hearth, and prepared area features

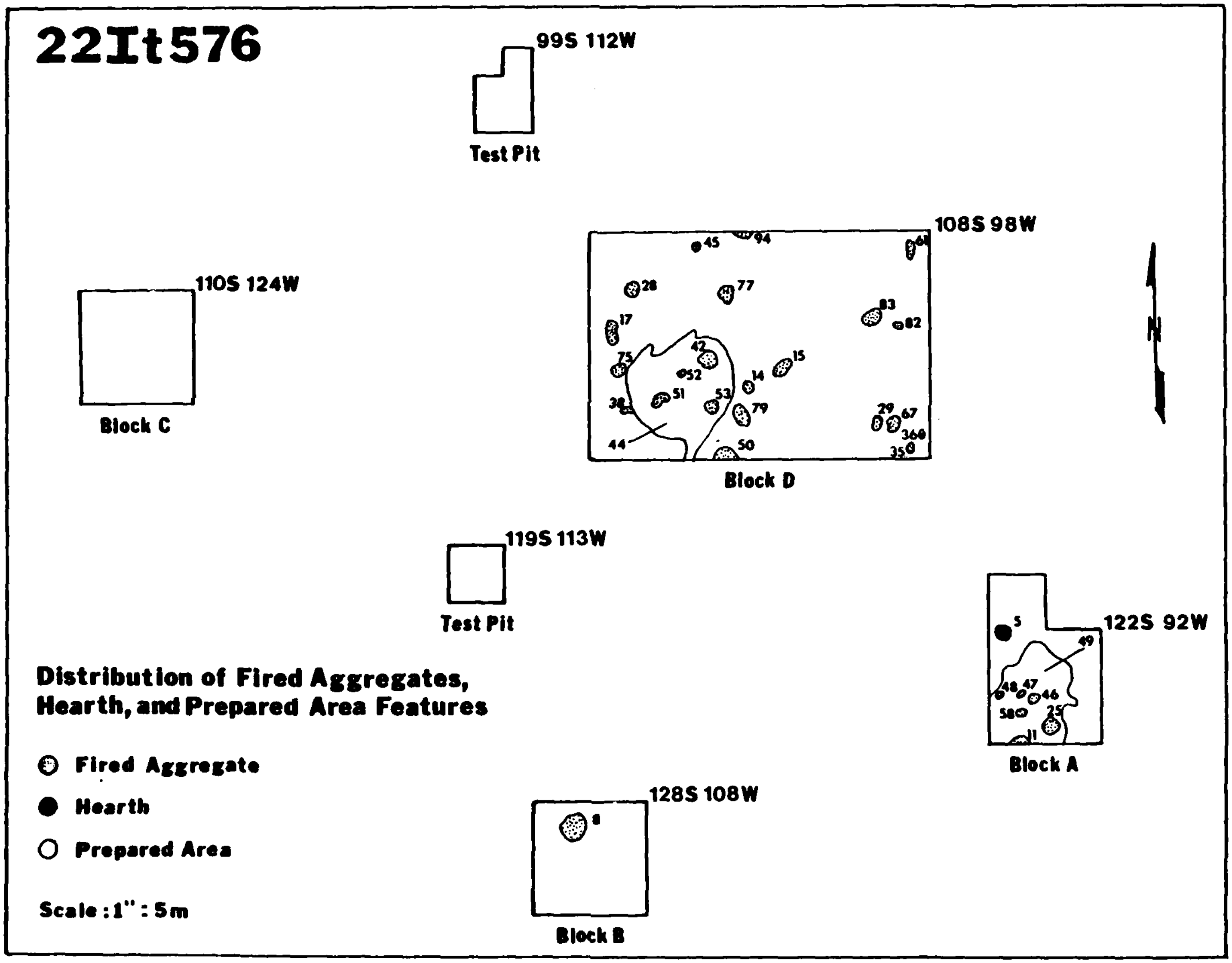

22It576
99S 112W
Test Pit
110S 124W
Block C
108S 98W
45
94
61
28
77
17
83
82
75
42
52
15
14
38
51
53
79
29
67
36
44
50
35
Block D
N
119S 113W
Test Pit
5
122S 92W
49
48
47
46
58
25
11
Block A
Distribution of Fired Aggregates,
Hearth, and Prepared Area Features
Fired Aggregate
Hearth
Prepared Area
128S 108W
8
Scale : 1" : 5m
Block B

Figure 7.26

Site 22IT576: Feature 25. Fired aggregate

Figure 7.27

Site 22IT576: Feature 50. Fired aggregate, archaeomagnetic sampling in progress


22IT576
BLOCK A
FEATURE 25
125.80 S 93.75 W
EL: 80.46
30 APR 80

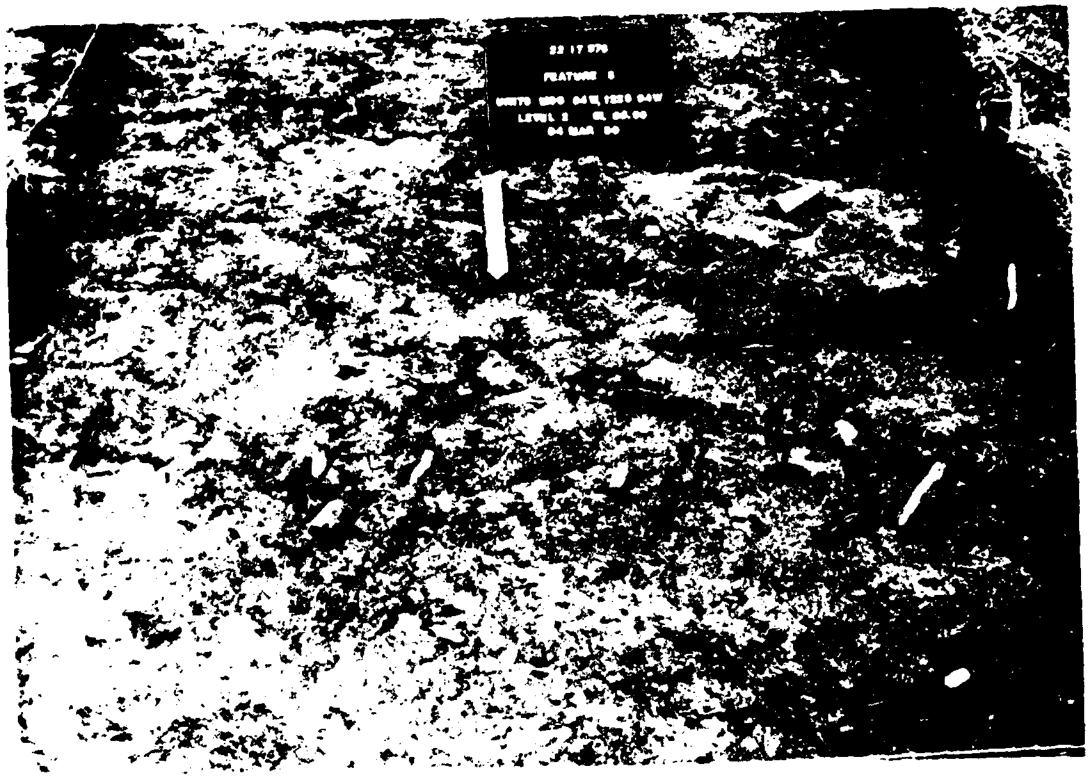

22IT576
BLOCK D
FEATURE 50
115.75S 106.25W
EL: 80.42
PROGRESS
16 MAY 80

Figure 7.28

Site 22IT576: Feature 5. Hearth

Figure 7.29

Site 22IT576: Feature 11. Pit, excavated



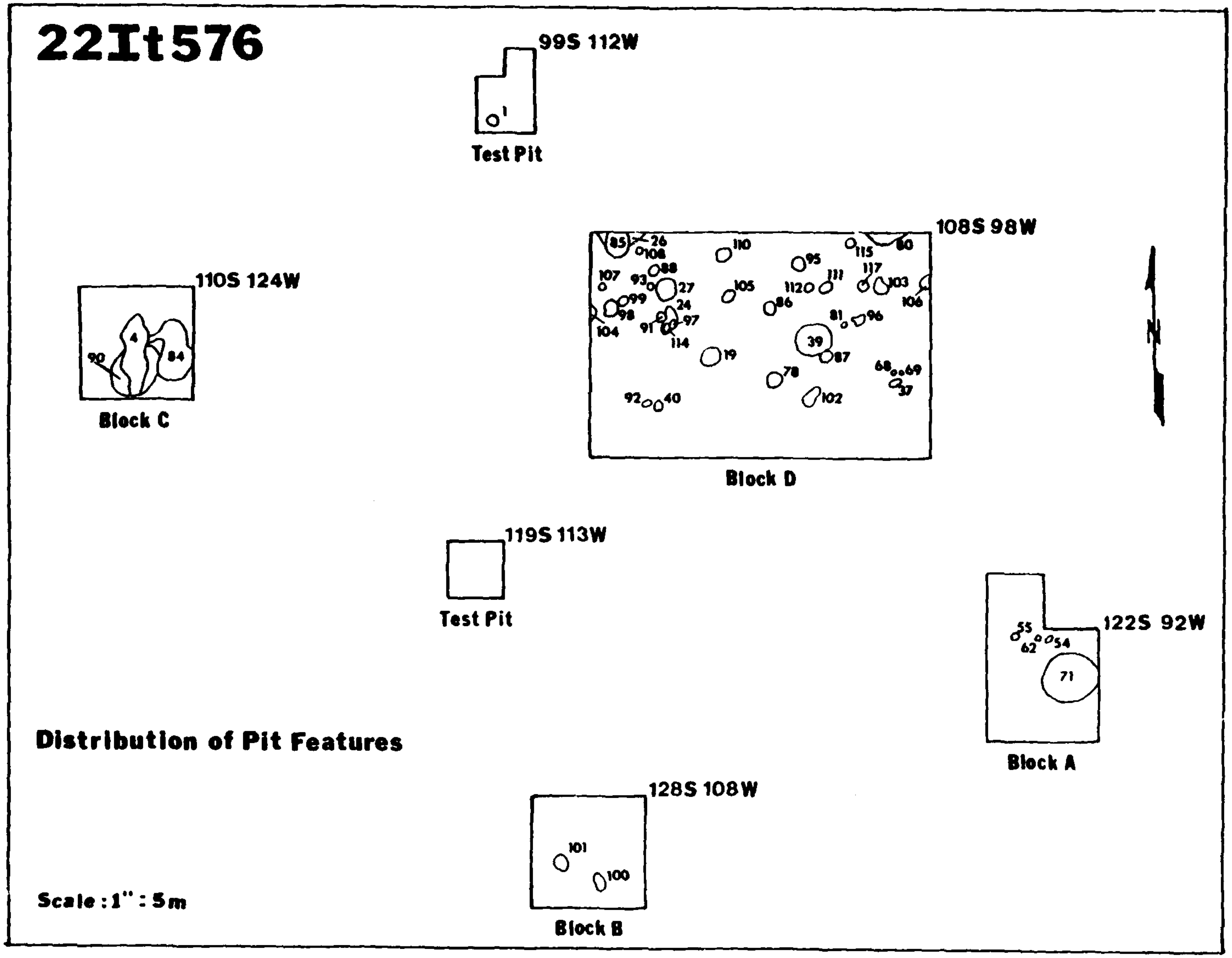

22IT576
BLOCK D
FEATURE III
110.208 101.60W
EL: 79.90-79.47
FINAL
1 JULY 80

Figure 7.30

Site 22IT576: Feature 44. Prepared area, Block D

Figure 7.31

Site 22IT576: Distribution of pit features



22It576
99S 112W
Test Pit
110S 124W
Block C
108S 98W
Block D
119S 113W
Test Pit
122S 92W
Block A
Distribution of Pit Features
128S 108W
Block B
Scale : 1" : 5m

Figure 7.32

Site 22IT576: Feature 39. Pit cross section

Figure 7.33

Site 22IT576: Feature 39. Pit excavated


BLOCK D
FEATURE 30
SOUTH PROFILE

Figure 7.34

Site 22IT576: Distribution of inhumations and cremations

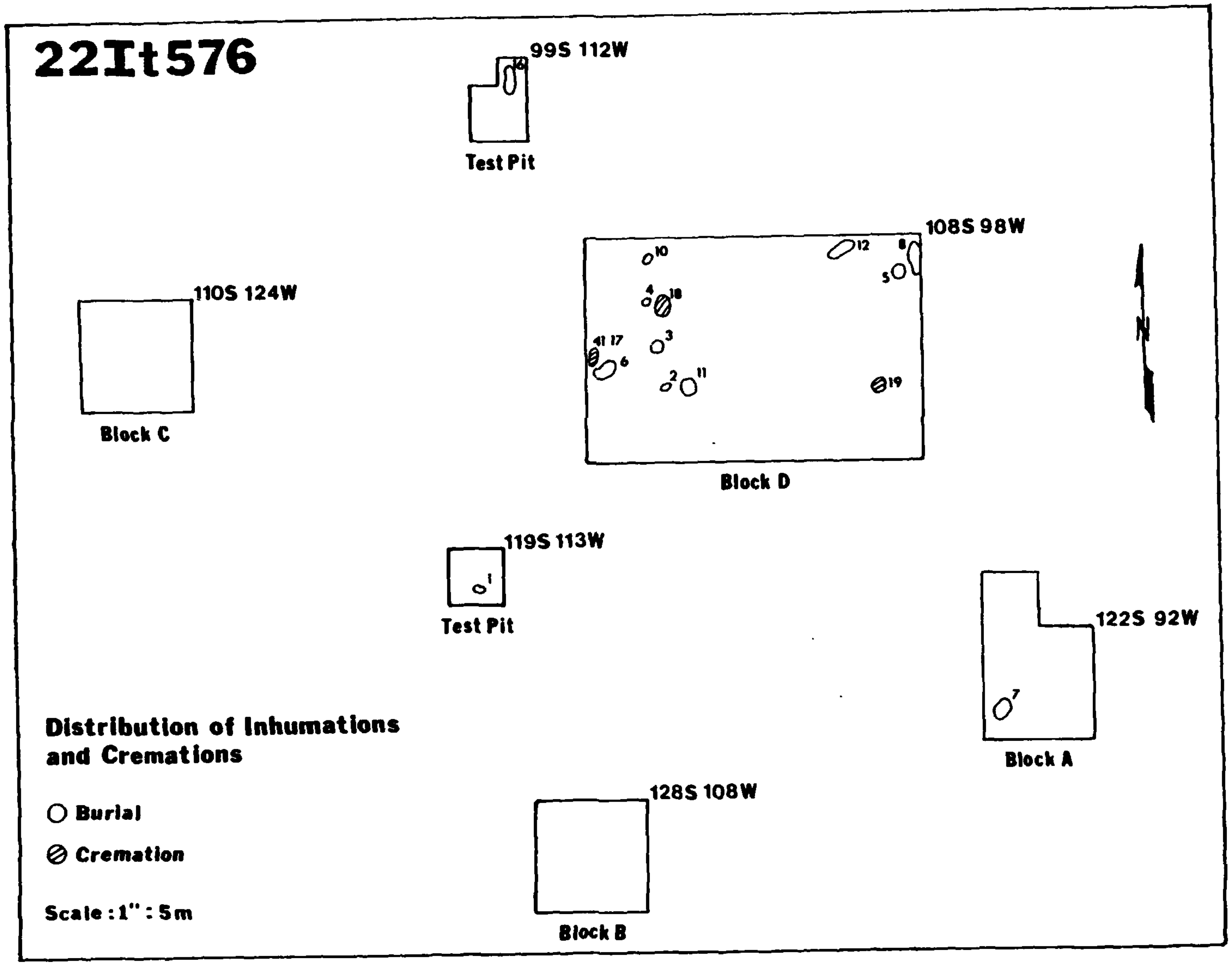

22It576
99S 112W
Test Pit
110S 124W
Block C
108S 98W
Block D
N
119S 113W
Test Pit
122S 92W
Block A
128S 108W
Block B
Distribution of Inhumations and Cremations
Burial
Cremation
Scale : 1" : 5m

Figure 7.35

Site 22IT576: Burial 11 (Feature 74) in cross-section

Figure 7.36

Site 22IT576: Burial 11 (Feature 74) completely exposed

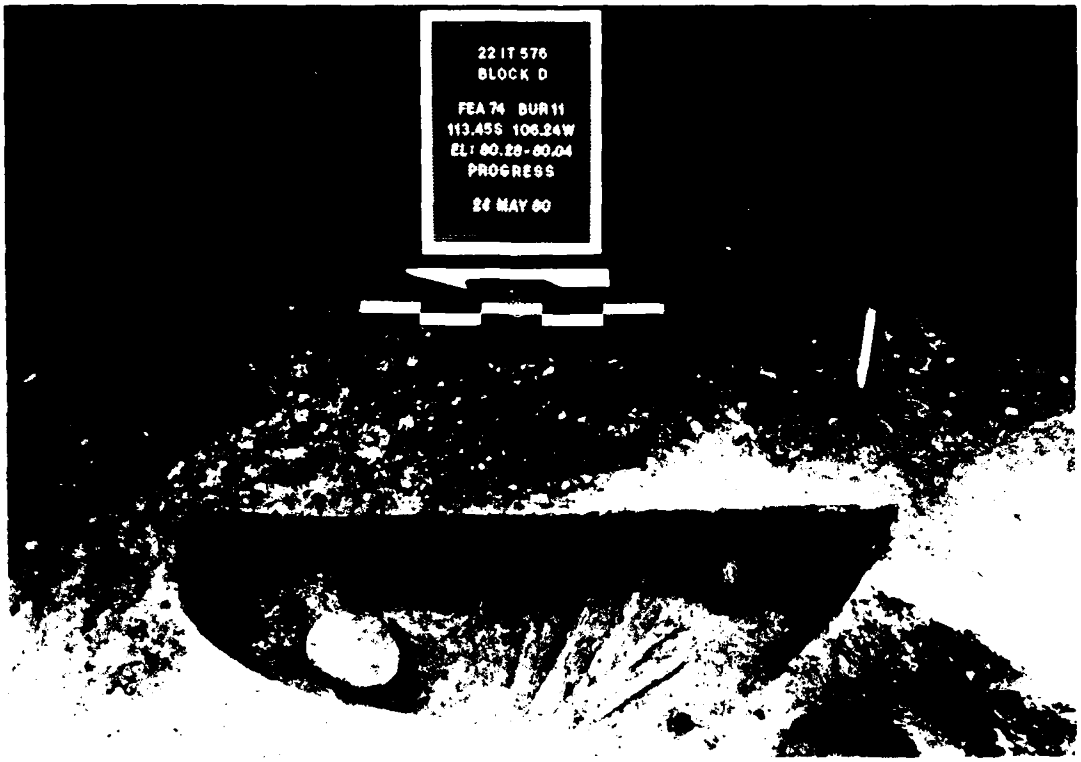

22 IT 576
BLOCK D
FEA 74 BUR 11
113.45S 106.24W
EL: 80.28-80.04
PROGRESS
24 MAY 80

Figure 7.37

Site 22IT576: Burial 12 (Feature 121) completely exposed

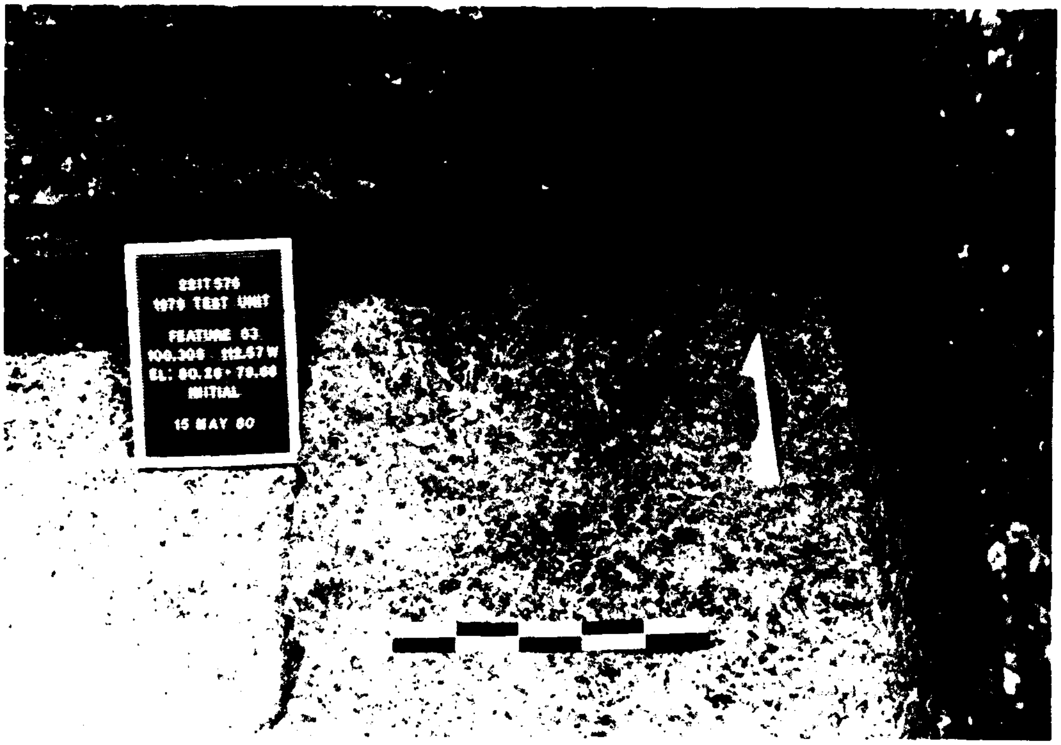

22IT 576
BLOCK D
FEA 121 BUR 12
108.73S 101.23W
FINAL
12 AUG 80

Figure 7.38

Site 22IT576: Burial 16 (Feature 63) stain at base of 1979 test pit prior to exposure of skeleton

Figure 7.39

Site 22IT576: Burial 16 (Feature 63), completely exposed. Note dog skull to left of femur.


1979 TEST UNIT
FEATURE 63
INITIAL
15 MAY 80

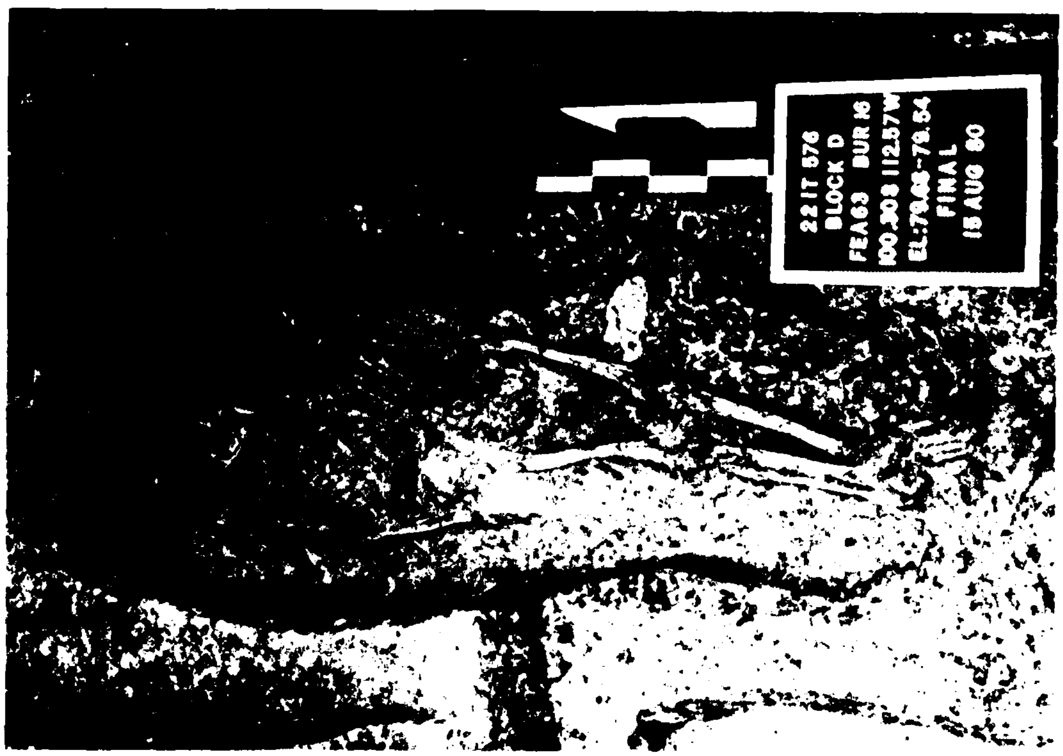
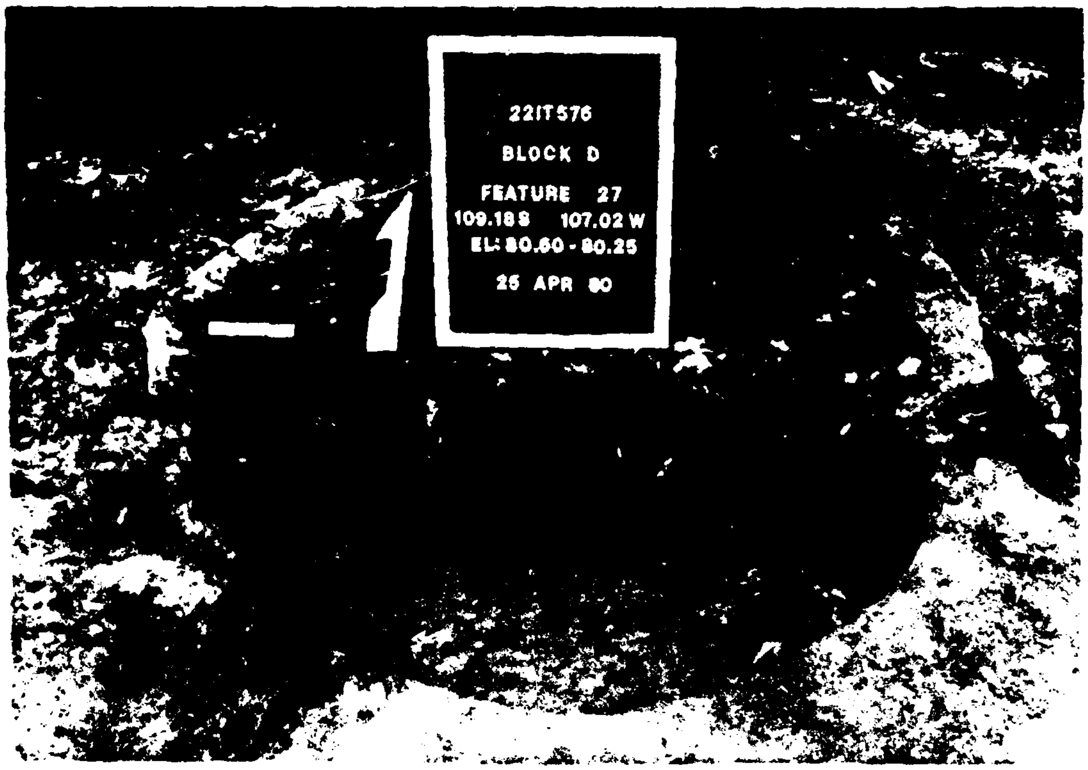

22IT576
BLOCK D
FEA63 BUR16
FINAL
15 AUG 80

Figure 7.40

Site 22IT576: Feature 27 (Burial 18), cross-section

Figure 7.41

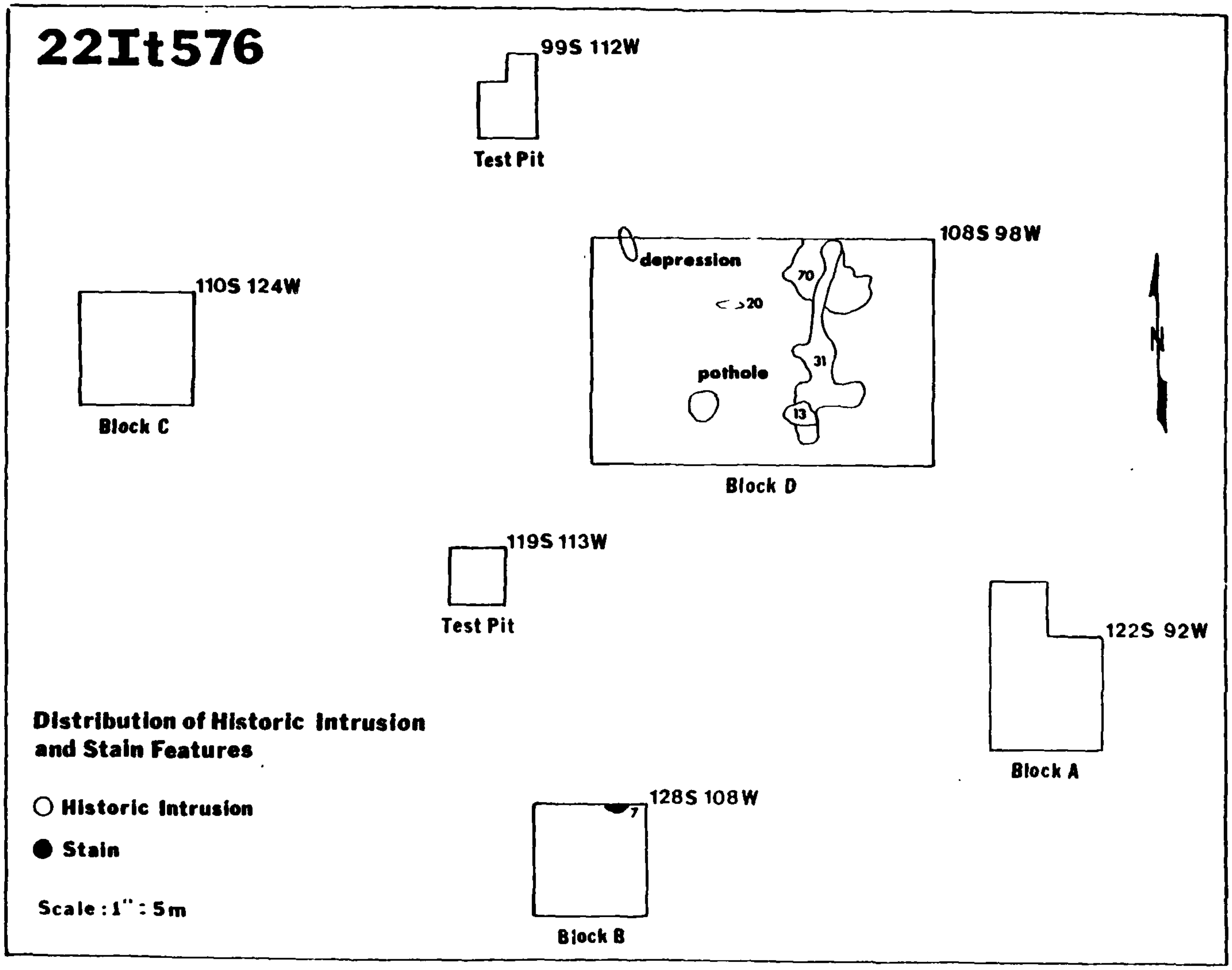
Site 22IT576: Feature 27 (Burial 18), excavated


22IT576
BLOCK D
FEATURE 27
109.18 S 107.02 W
EL: 80.60 - 80.25
25 APR 80


BLOCK D
FEATURE 27

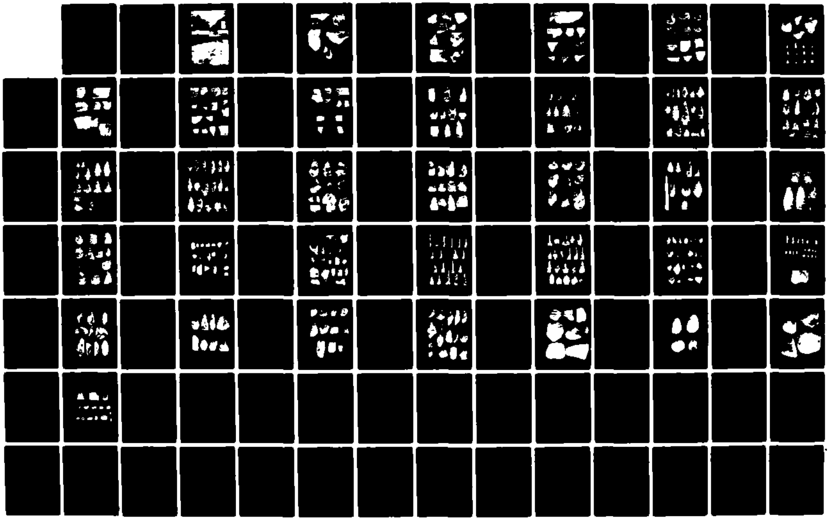
Figure 7.42

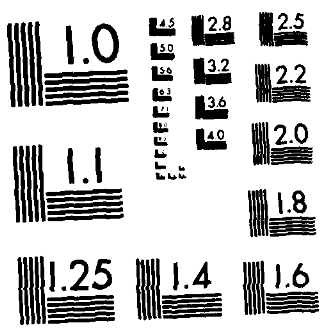
Site 22IT576: Distribution of historic intrusions


22It576
99S 112W
Test Pit
110S 124W
Block C
depression
70
20
pothole
31
13
108S 98W
Block D
N
119S 113W
Test Pit
122S 92W
Block A
Distribution of Historic Intrusion
and Stain Features
Historic Intrusion
Stain
Scale : 1" : 5m
128S 108W
7
Block B

AD-A126 691 ARCHAEOLOGICAL INVESTIGATIONS IN THE UPPER TOMBIGBEE VALLEY MISSISSIPPI:..(U) UNIVERSITY OF WEST FLORIDA PENSACOLA OFFICE OF CULTURAL AND A.. J A BENSE ET AL. 5/8

UNCLASSIFIED 1983 DACW01-80-C-0063 F/G 5/6 NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Figure 7.43

Site 22IT576: Feature 70. Historic intrusion, completed excavation, looking north

Figure 7.44

Site 22IT576: Feature 70. Historic intrusion, completed excavation, looking west

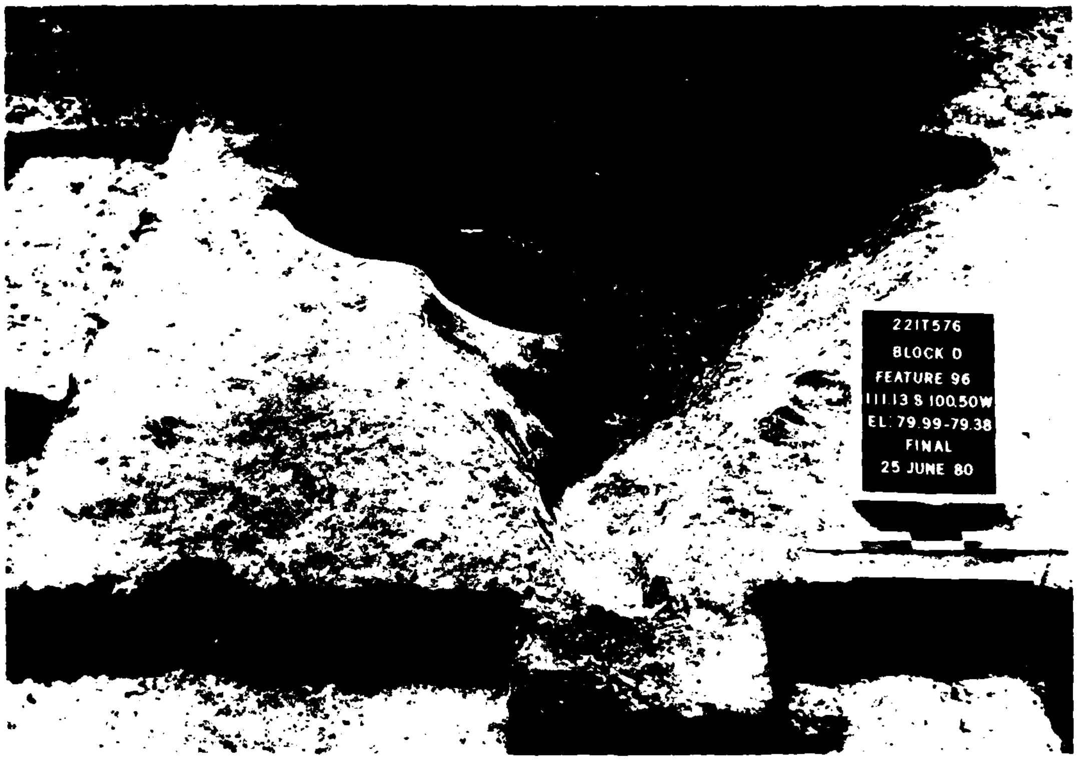

22IT576
BLOCK D
FEATURE 96
111.13 S 100.50W
EL: 79.99-79.38
FINAL
25 JUNE 80

Figure 7.45

Site 22IT576: Selected shell tempered wares

a. Mississippi Plain (1091-1)
b. Mississippi Plain (940-25)
c. Mississippi Plain (1042-31)
d. Mississippi Plain (1013-19)
e. Mississippi Plain Handle (959-3)

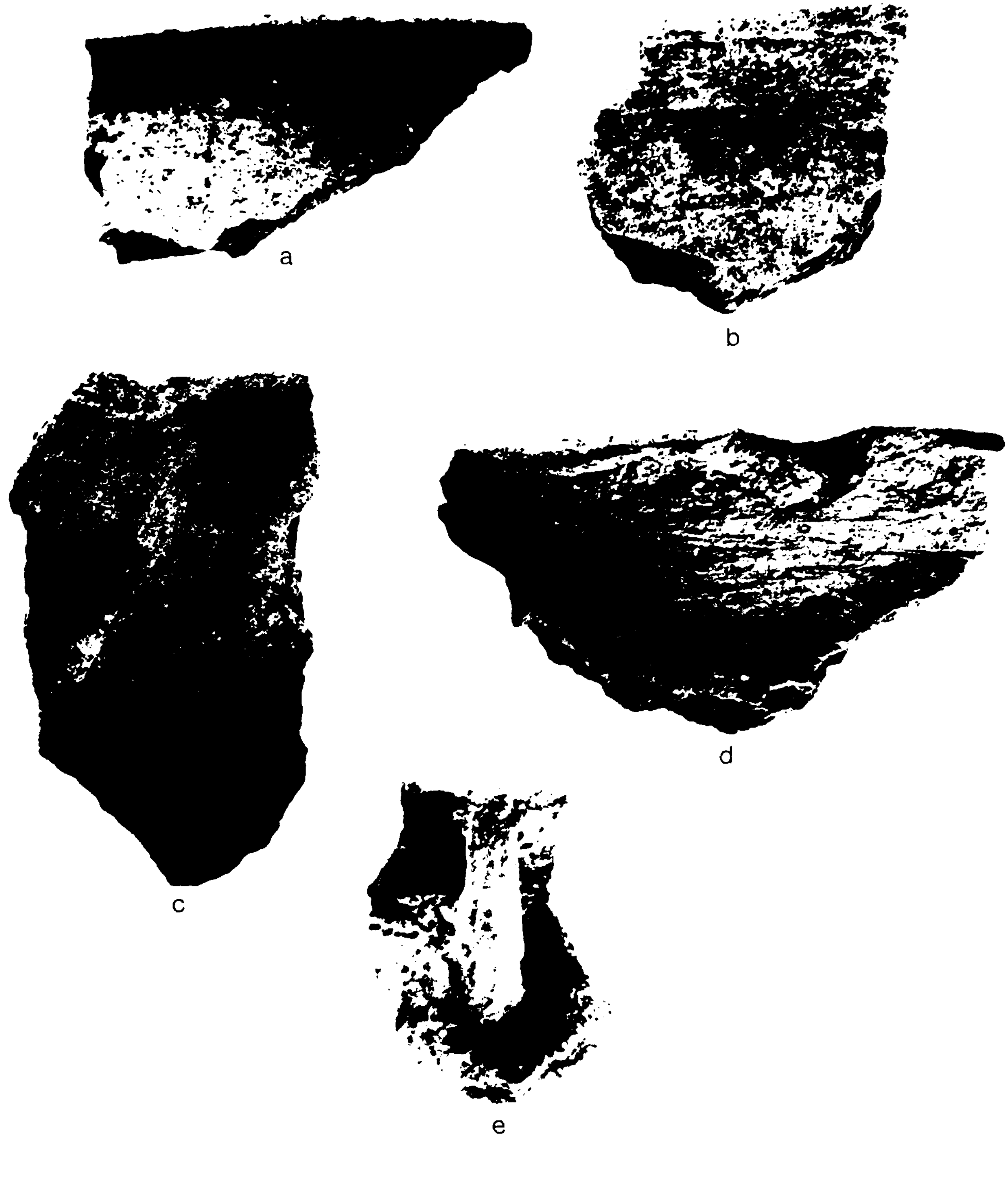

a
b
c
d
e

Figure 7.46

Site 22IT576: Selected grog tempered ceramics

a. Mulberry Creek Cord Marked (1000-235)
b. Mulberry Creek Cord Marked (1159-27)
c. Mulberry Creek Cord Marked (674-19)
d. Mulberry Creek Cord Marked (1097-15)
e. Baytown Plain (1118-6)
f. Baytown Plain (1096-21)
g. Baytown Plain (1000:82)
h. Baytown Plain (1042-66)


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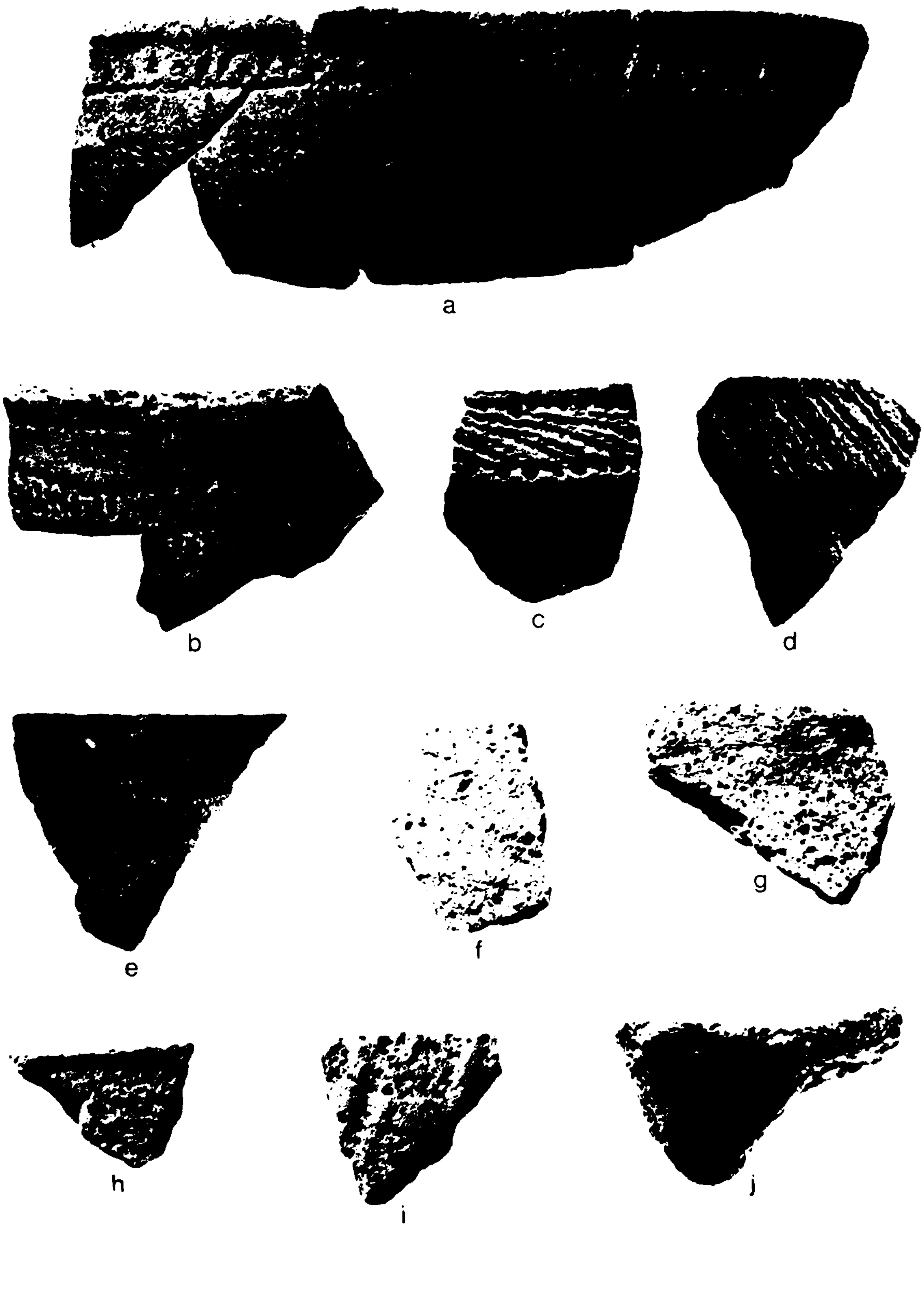
Figure 7.47

Site 22IT576: Selected grog and limestone tempered ceramics

a. Cormorant Cord Impressed (1014-26)
b. Cormorant Cord Impressed (1650-14)
c. Cormorant Cord Impressed (1125-2)
d. Cormorant Cord Impressed (1602-21)
e. Cormorant Cord Impressed (1096-31)
f. Mulberry Creek Plain (1096-41)
g. Mulberry Creek Plain (1108-16)
h. Mulberry Creek Plain (1119-21)
i. Mulberry Creek Plain (702-3)
j. Mulberry Creek Plain (1046-104)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Figures 7.48

Site 22IT576: Selected fiber tempered ceramics

a. Wheeler Dentate Stamped (1042-151)
b. Wheeler Dentate Stamped (1325-63)
c. Wheeler Dentate Stamped (1259-130)
d. Wheeler Dentate Stamped (1187-131)
e. Wheeler Simple Stamped (2847-20)
f. Wheeler Simple Stamped (1006-138)
g. Wheeler Punctate (960-79)
h. Wheeler Punctate (679-122)
i. Wheeler Plain (933-228)
j. Wheeler Plain (663-255)
k. Wheeler Plain (1791-8)
l. Wheeler Plain (755-1)

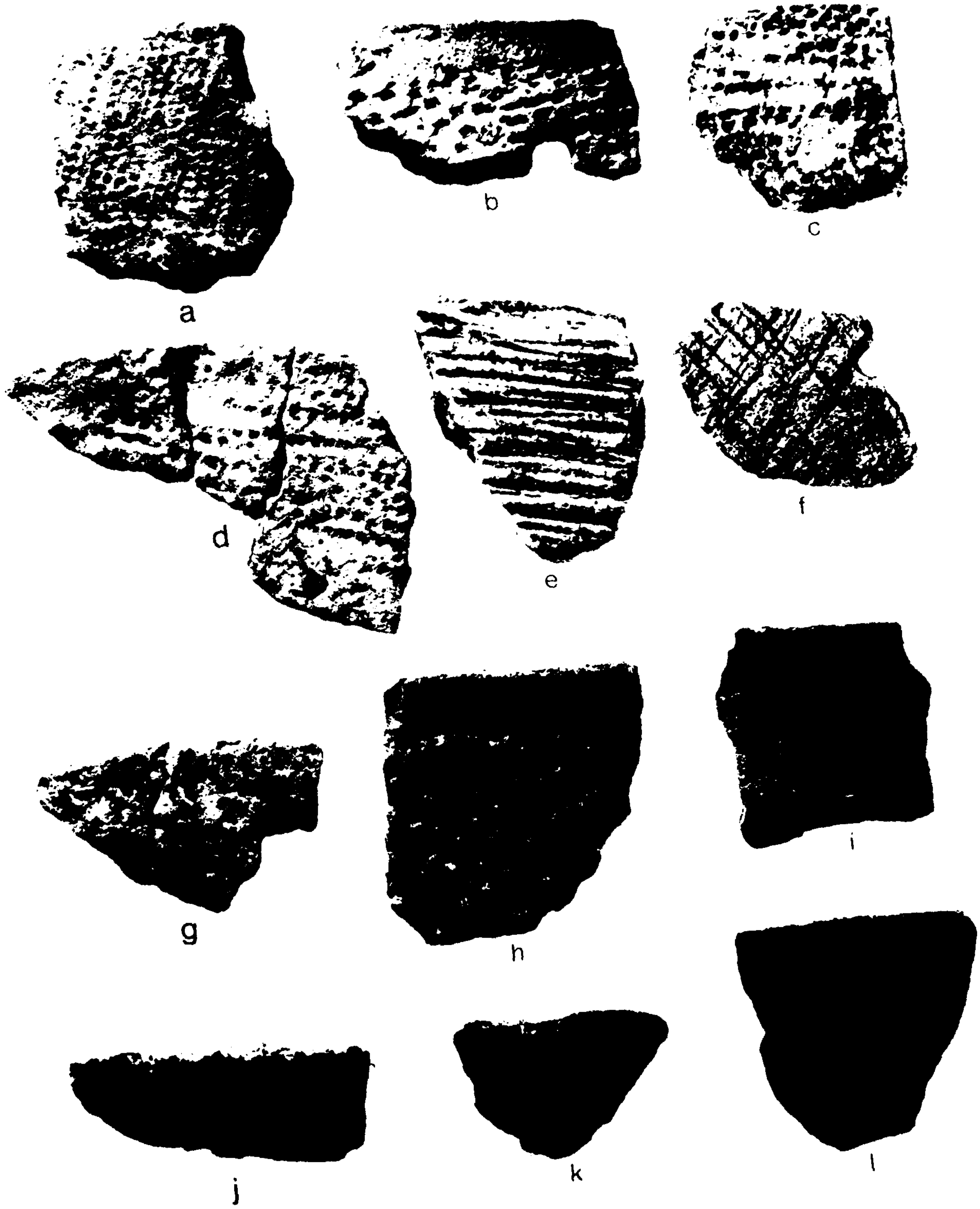
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Figure 7.49

Site 22IT576: Selected fiber tempered vessel bases and Late Woodland/Mississippian Triangular Projectile Point/Knives

a. Wheeler Plain Base (1095-41)
b. Wheeler Plain Base (1285-35)
c. Wheeler Plain Base (1181-19)
d. Wheeler Plain Base (1042-155)
e. Late Woodland/Mississippian Triangular (680-202)
f. Late Woodland/Mississippian Triangular (1027-13)
g. Late Woodland/Mississippian Triangular (1503-43)
h. Late Woodland/Mississippian Triangular (2554-15)
i. Late Woodland/Mississippian Triangular (1401-28)
j. Late Woodland/Mississippian Triangular (977-190)
k. Late Woodland/Mississippian Triangular (2541-3)
l. Late Woodland/Mississippian Triangular (941-171)
m. Late Woodland/Mississippian Triangular (2840-92)
n. Late Woodland/Mississippian Triangular (942-196)
o. Late Woodland/Mississippian Triangular (1006-150)
p. Late Woodland/Mississippian Triangular (1222-80)

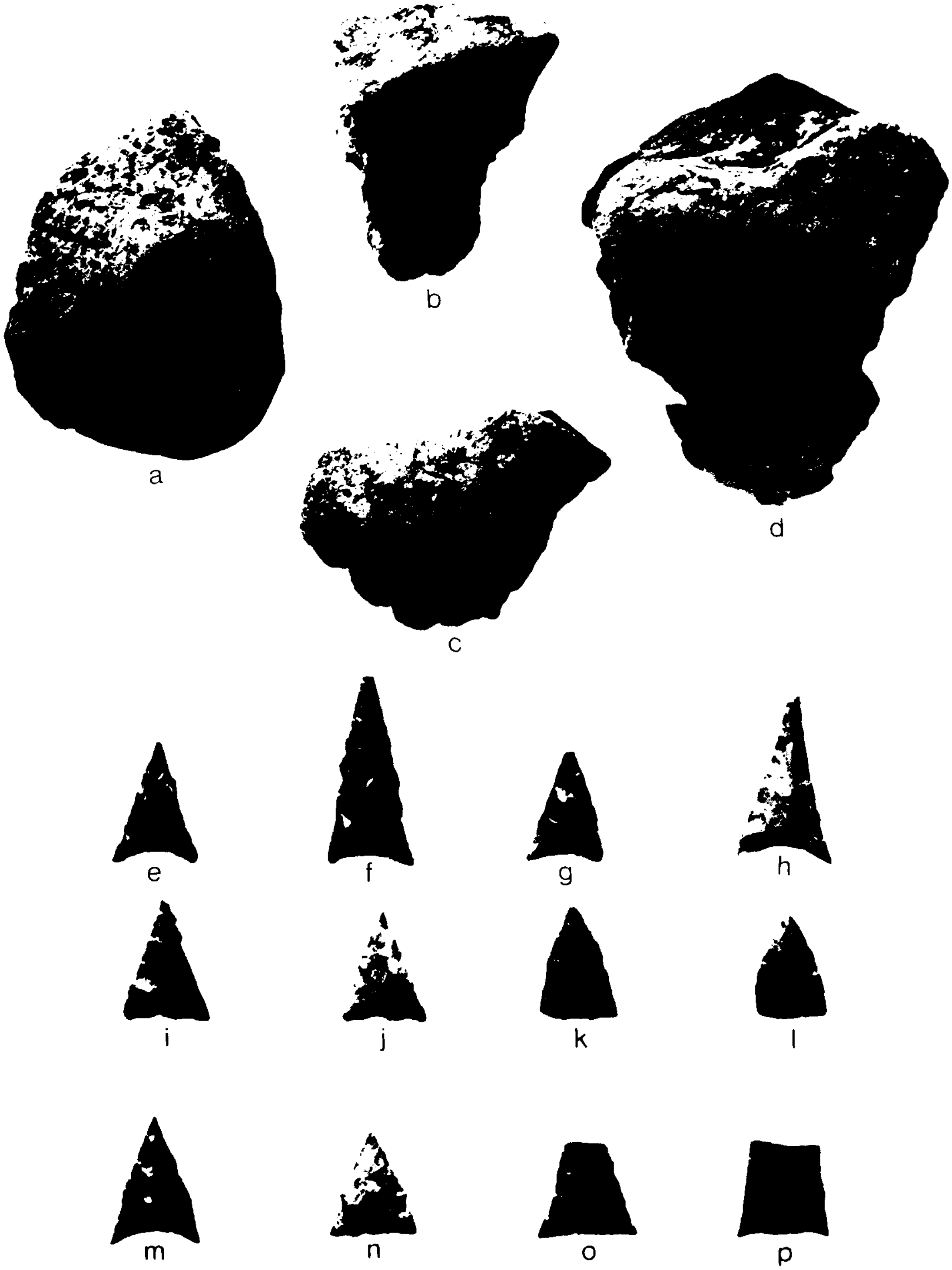
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Figure 7.50

Site 22IT576: Selected Alexander Ceramics

a. Alexander Incised (1624-13)
b. Alexander Incised (1047-74)
c. Alexander Incised (997-1)
d. Alexander Incised (941-57)
e. Alexander Incised (946-34)
f. Alexander Incised (1279-1)
g. Alexander Incised (base) (673-2)

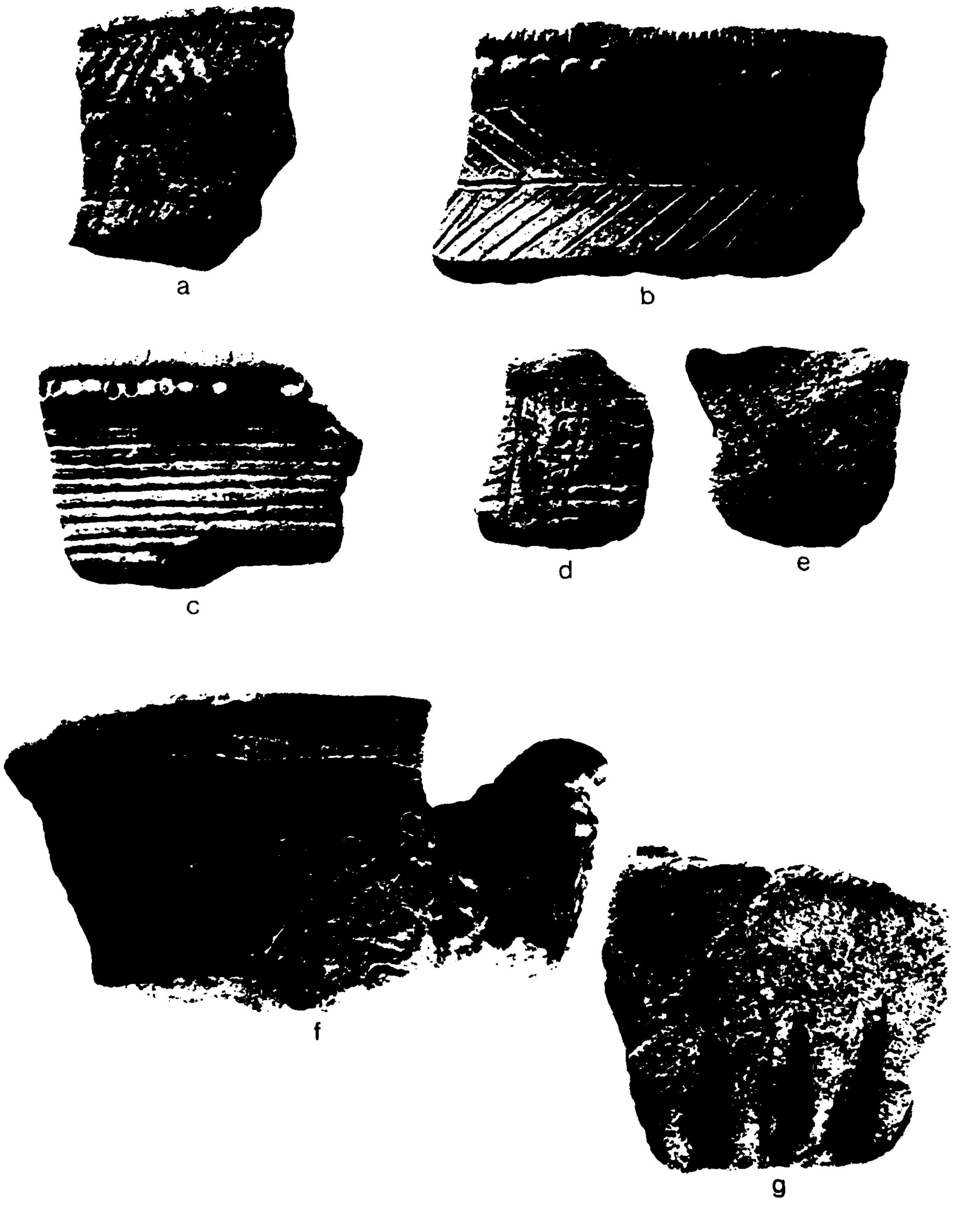
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Figure 7.51

Site 22IT576: Selected Alexander Ceramics

a. Alexander Pinched (1212-43)
b. Alexander Pinched (1118-17)
c. Alexander Pinched (1621-17)
d. Alexander Pinched (1241-32)
e. Smithsonia Zone Stamped (942-79)
f. Smithsonia Zone Stamped (1221-40)
g. Alexander Incised/Pinched (2838-33)
h. Alexander Incised/Columbus Punctate (1185-4)
i. Alexander Incised/Columbus Punctate (690-15)
j. Alexander Incised/Columbus Punctate (1076-44)
k. Alexander Incised/Columbus Punctate (1043-59)
l. Columbus Punctate (1001-65)
m. Columbus Punctate (1186-31)
n. Columbus Punctate (1062-49)
o. Columbus Punctate (1006-63)

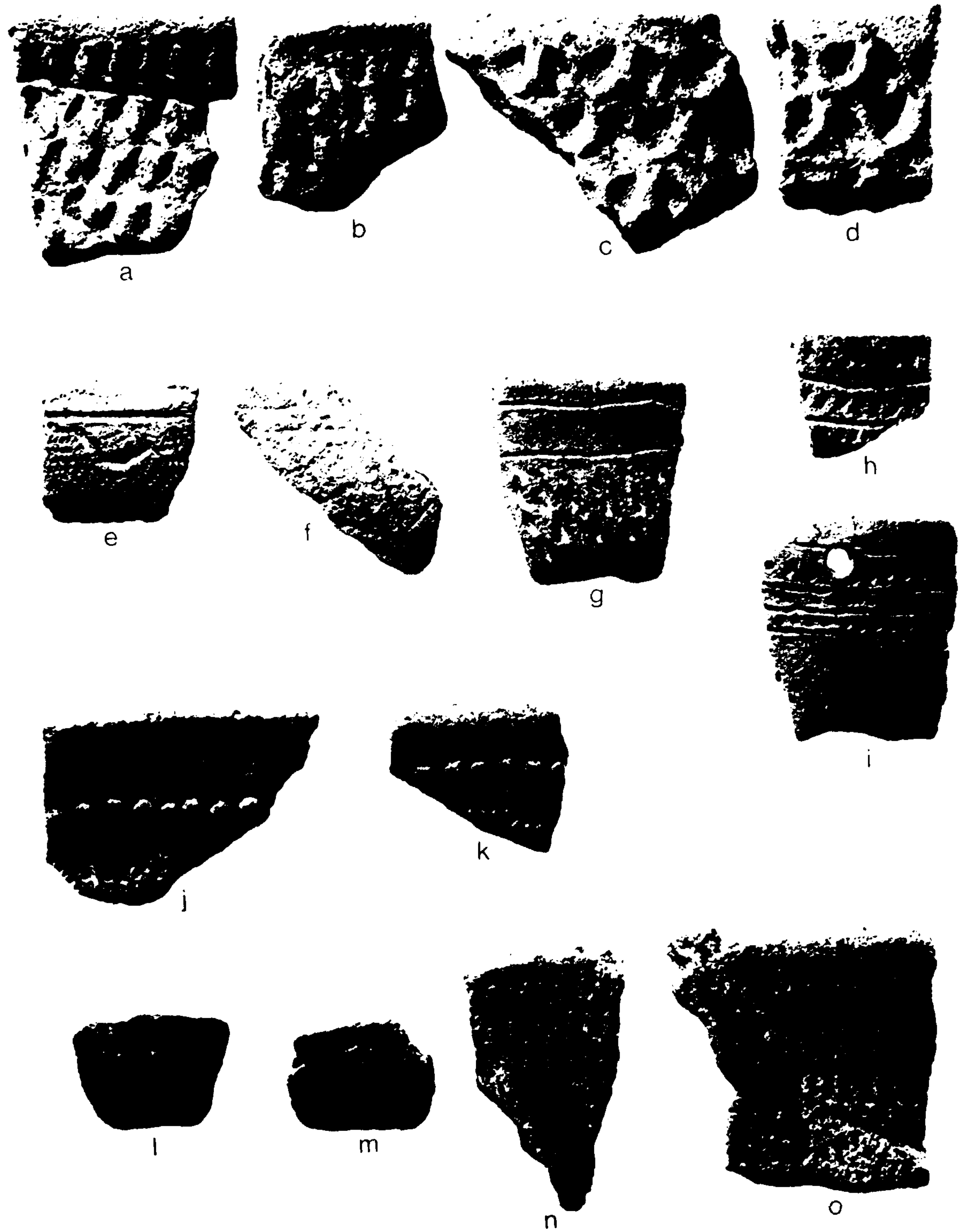
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Figure 7.52

Site 22IT576: Bone tempered and Furrs Cord Marked ceramics

a. Turkey Paw Plain (971-13)
b. Turkey Paw Plain (1001-53)
c. Turkey Paw Plain (1000-102)
d. Turkey Paw Plain (1047-55)
e. Turkey Paw Cord Marked (977-99)
f. Turkey Paw Cord Marked (1022-13)
g. Furrs Cord Marked (1001-101)
h. Furrs Cord Marked (1009-15)
i. Furrs Cord Marked (101:103)
j. Furrs Cord Marked (1246-24)


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Figure 7.53

Site 22IT576: Selected Benton projectile point/knives

a. Benton, Variety A (2037-6)
b. Benton, Variety A (2568-1)
c. Benton, Variety B (1967-1)
d. Benton, Variety B (2739-1)
e. Benton, Variety C (1744-2)
f. Benton, Variety C (1936-1)
g. Benton, Variety D (2670-2)
h. Benton, Variety D (1725-1)
i. Benton, Variety E (3667-1)
j. Benton, Variety E (3056-1)

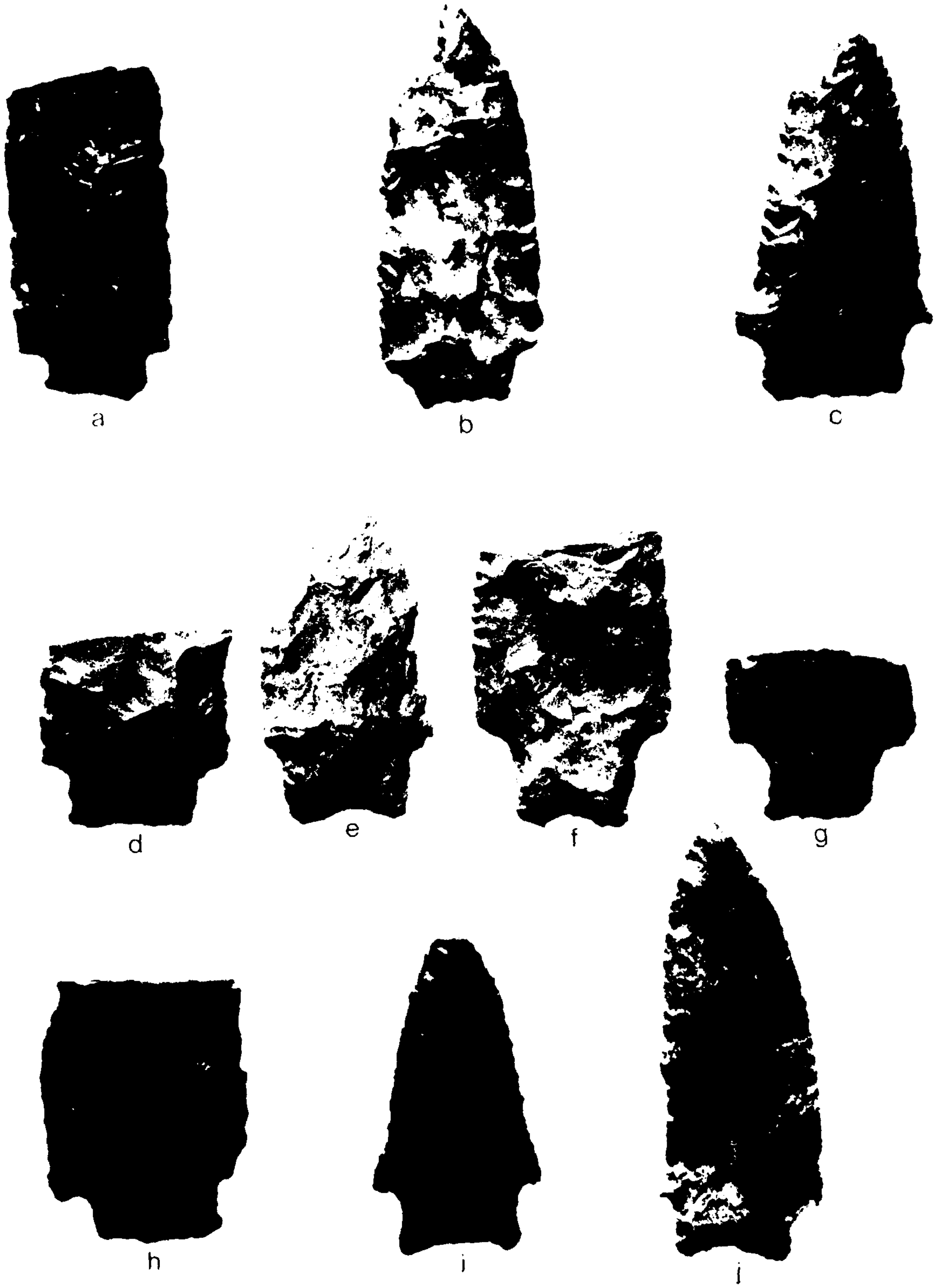
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Figure 7.54

Site 22IT576: Selected Big Sandy, Greenbrier, and Kirk projectile point/knives

a. Big Sandy (4945-1)
b. Big Sandy (4569-1)
c. Greenbrier (4380-2)
d. Greenbrier (2020-7)
e. Kirk, Variety A (5770-1)
f. Kirk, Variety A (4678-1)
g. Kirk, Variety A (5645-1)
h. Kirk, Variety A (4394-1)
i. Kirk, Variety A (4349-1)
j. Kirk, Variety B (4227-1)
k. Kirk, Variety B (4286-1)
l. Kirk, Variety C (3478-1)
m. Kirk, Variety C (3720-1)
n. Kirk, Variety C (3418-1)

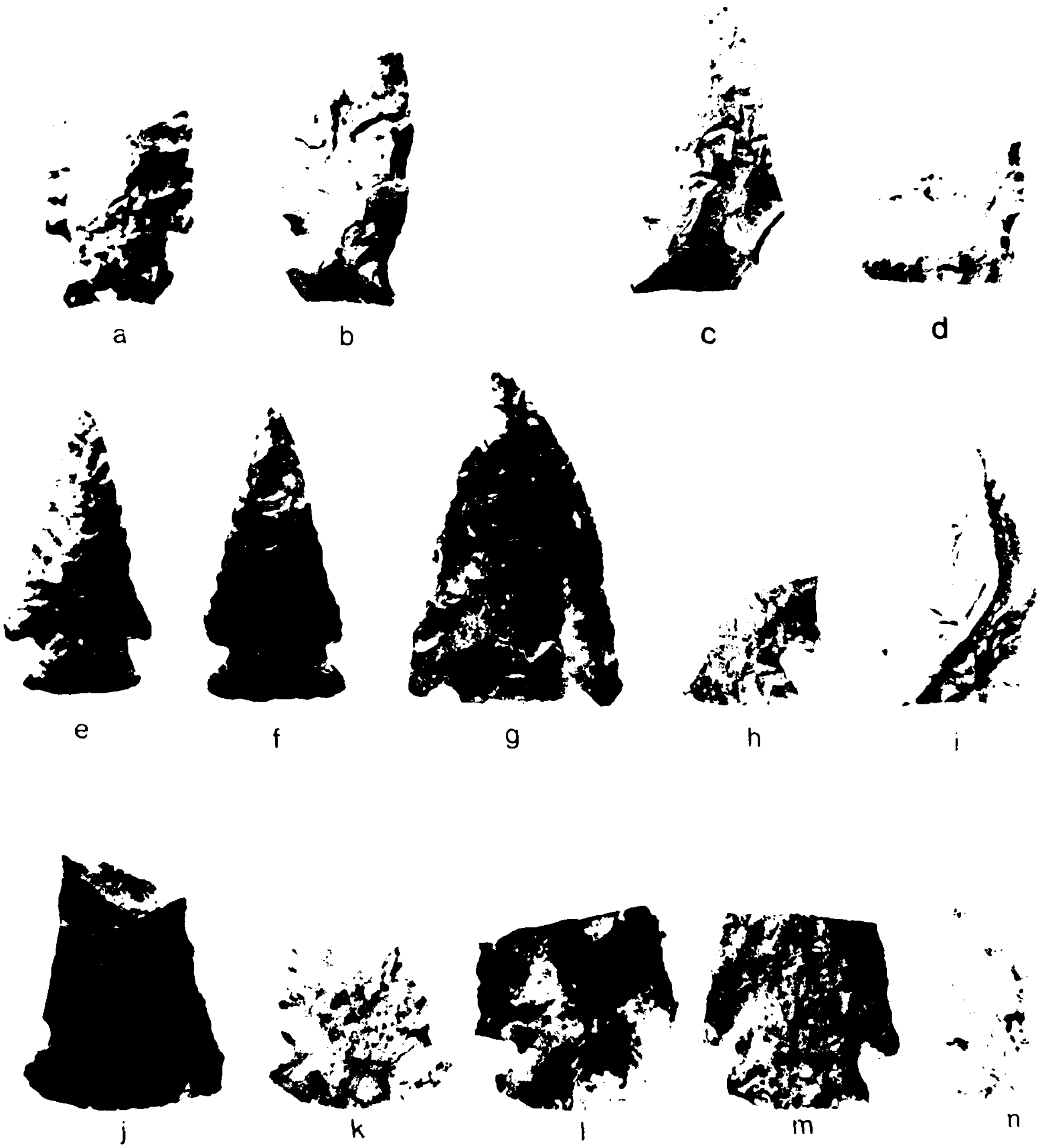
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Figure 7.55

Site 22IT576: Selected porjectile point/knives

a. Collins (944-119)
b. Bradley Spike (1607-8)
c. Flint Ribver Spike (1178-157)
d. Tombigbee Stemmed (678-145)
e. Big Slough (1130-10)
f. Cotaco Creek (1194-36)
g. Elora (861-1)
h. Ledbetter/Pickwick (1193-1)
i. Ledbetter/Pickwick (706-23)
j. Limestone (1328-39)
k. Savannah River (1622-1)
l. Vaughn (949-199)
m. Cypress Creek (2802-1)
n. Residual Triangular, small (2963-1)
o. Residual Triangular, large (3189-1)
p. Swan Lake (1136-58)

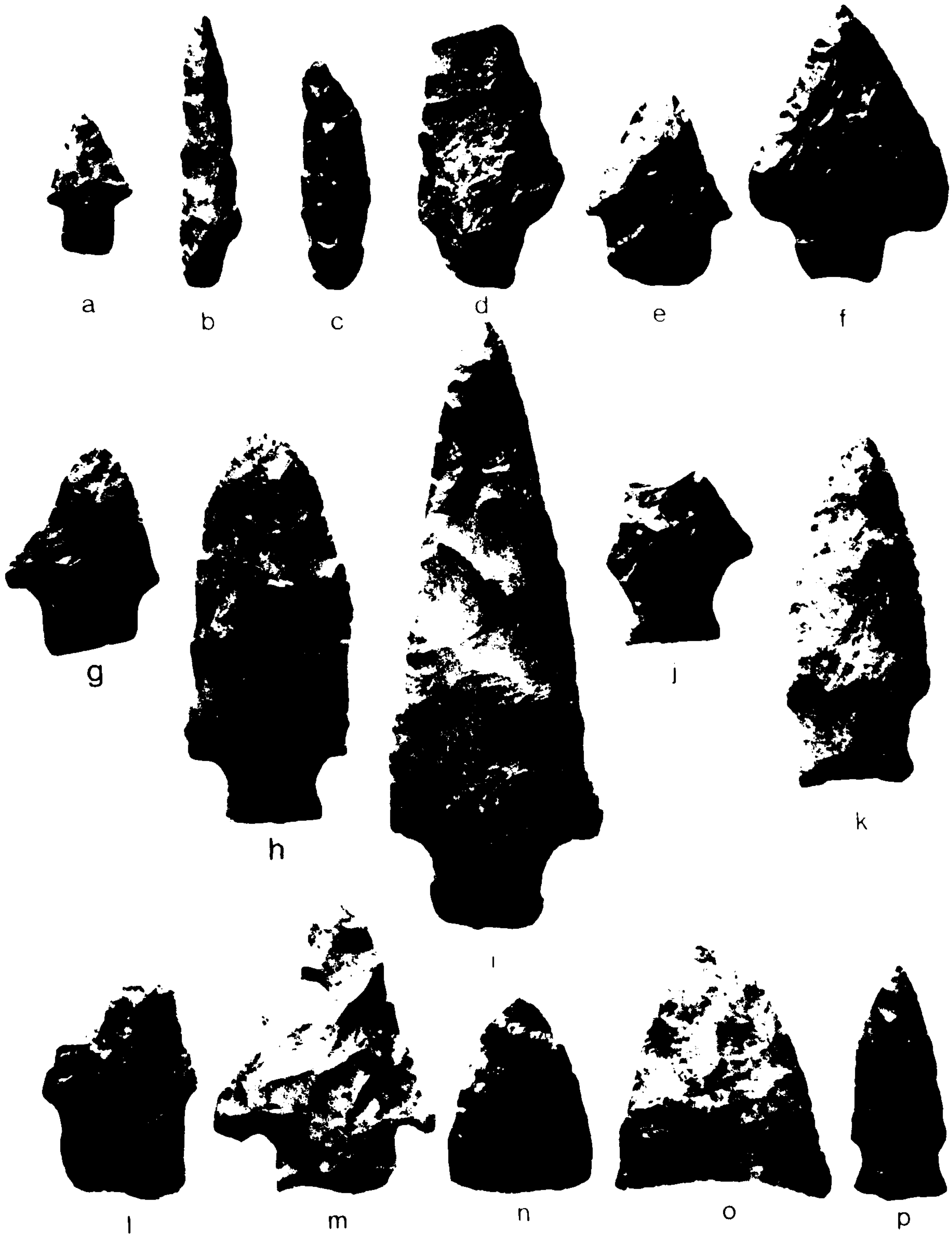

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Figure 7.56

Site 22IT576: Selected Morrow Mountain, Sykes-White Springs, and Dalton projectile point/knives

a. Morrow Mountain Rounded Base (2126-2)
b. Morrow Mountain Rounded Base (1857-5)
c. Morrow Mountain Rounded Base (3336-1)
d. Morrow Mountain Rounded Base (3255-1)
e. Morrow Mountain Rounded Base (3192-1)
f. Morrow Mountain Rounded Base (1904-2)
g. Sykes-White Springs (3653-1)
h. Sykes-White Springs (2882-1)
i. Sykes-White Springs (2892-1)
j. Sykes-White Springs (3606-3)
k. Dalton (1001-13)
l. Sykes-White Springs (3259-1)
m. Sykes-White Springs (3533-1)
n. Dalton (3106-3)


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Figure 7.57

Site 22IT576: Selected projectile point/knives

a. Small Uniface Triangular (1000-26)
b. Small Uniface Triangular (1503-66)
c. Mud Creek (1114-73)
d. Gary (680-200)
e. McIntire (1194-38)
f. McIntire (161-111)
g. Eva, Variety A (3882-1)
h. Eva, Variety A (2666-1)
i. Eva, Variety B (3168-1)
j. Eva, Variety B (6399-1)
k. Eva, Variety B (674-64)
l. Eva, Variety B (2869-1)
m. Eva, Variety C (2869-1)

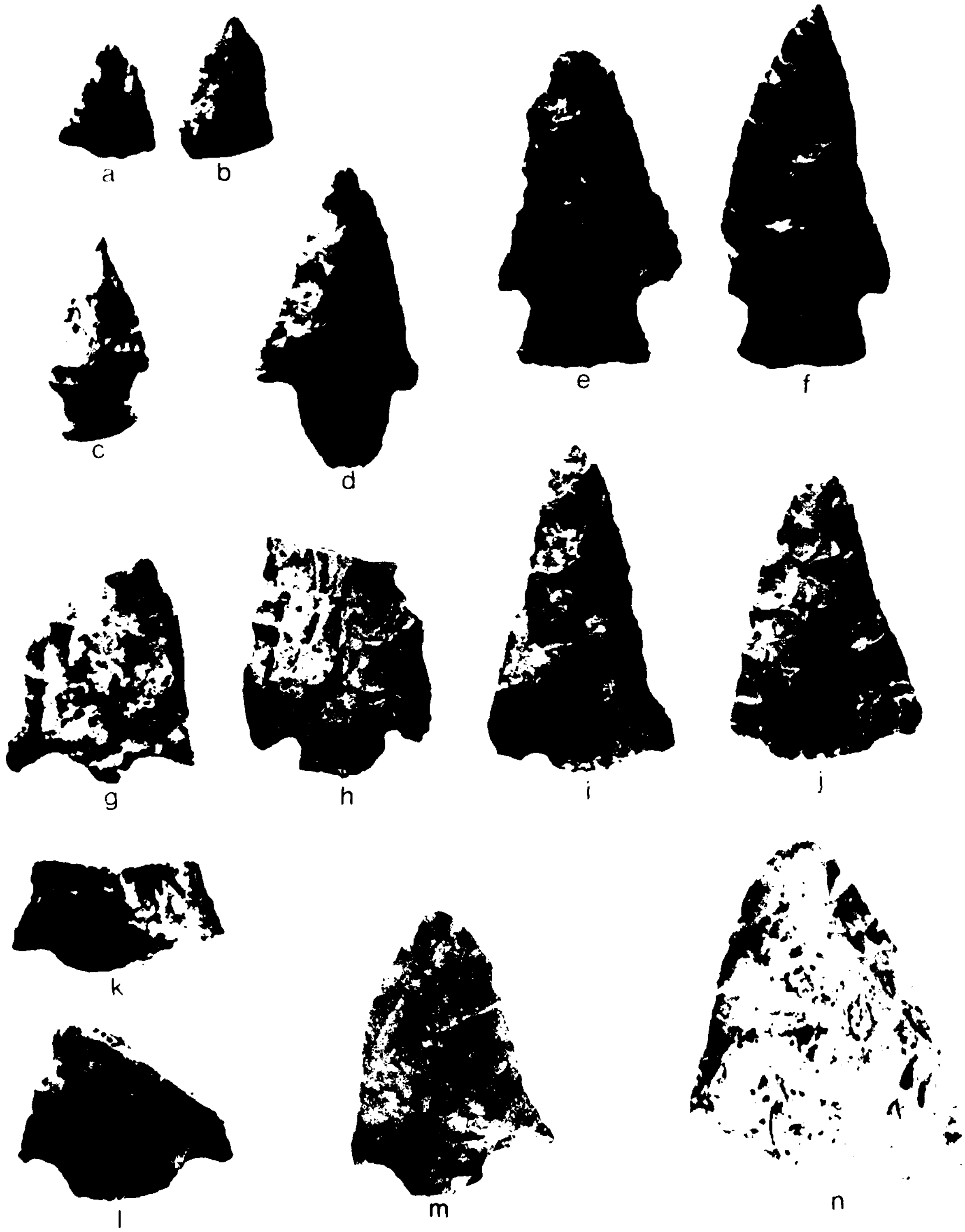
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Figure 7.58

Site 22iT576: Selected Little Bear Creek/Flint Creek projectile point/knives

a. Little Bear Creek/Flint Creek, Variety A (703-30)
b. Little Bear Creek/Flint Creek, Variety A (756-19)
c. Little Bear Creek/Flint Creek, Variety B1 (1477-1)
d. Little Bear Creek/Flint Creek, Variety B1 (1150-127)
e. Little Bear Creek/Flint Creek, Variety B2 (1670-12)
f. Little Bear Creek/Flint Creek, Variety B2 (1194-37)
g. Little Bear Creek/Flint Creek, Variety C (958-169)
h. Little Bear Creek/Flint Creek, Variety C (1531-10)
i. Little Bear Creek/Flint Creek, Variety C (960-88)
j. Little Bear Creek/Flint Creek, Variety D (1259-147)
k. Little Bear Creek/Flint Creek, Variety E (1002-212)
l. Little Bear Creek/Flint Creek, Variety E (948-281)
m. Little Bear Creek/Flint Creek, Variety F (705-13)
n. Little Bear Creek/Flint Creek, Variety G (979-118)
o. Little Bear Creek/Flint Creek, Variety G (987-1)
p. Little Bear Creek/Flint Creek, Variety H (1278-1)
q. Little Bear Creek/Flint Creek, Variety H (771-1)


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Figure 7.59

Site 22IT576: Selected Cores and Preform I's

a. 180° Bifacial adjacent (663-300)
b. 270° Unifacial (1812-1)
c. Core, other (1419-2)
d. Core, other (4532-1)
e. Core, fragment (4001-1)
f. Core, fragment (5287-1)
g. Microblade core (711-199)
h. Bipolar core (1608-46)
i. Preform I on flake (681-52)
j. Preform I on indeterminate (1669-1)
k. Preform I on cobble (1119-48)


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Figure 7.60

Site 22IT576: Selected Preform II's

a. on a flake (1090-130)
b. on a flake (1426-77)
c. on an expanding flake (2547-1)
d. on a flake (1672-7)
e. on an expanding flake (3297-1)
f. on an expanding flake (3279-2)
g. on indeterminate (3329-1)
h. on indeterminate (3555-1)
i. on indeterminate (681-54)
j. on indeterminate (1029-70)
k. on indeterminate (862-22)
l. on indeterminate (1285-14)

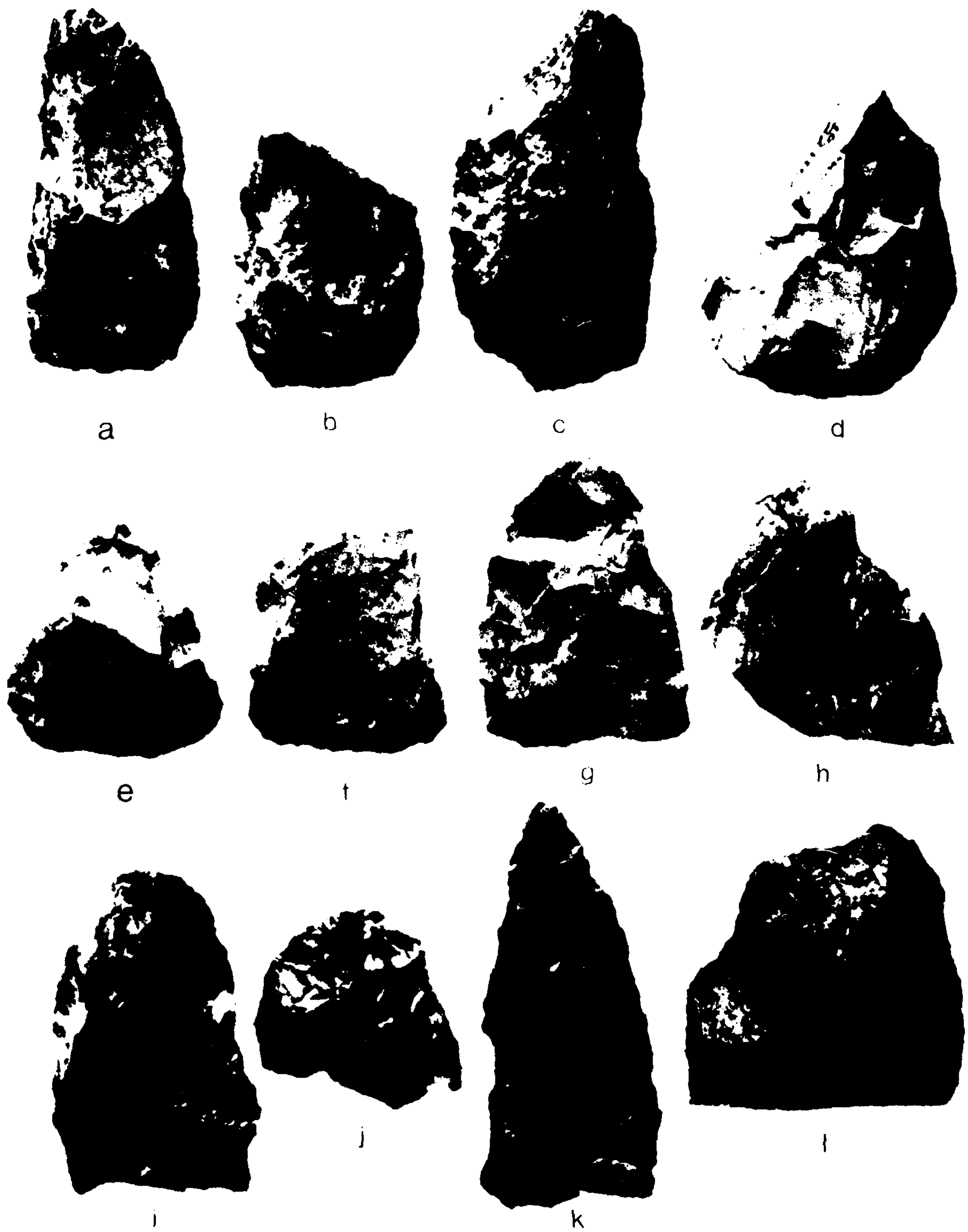
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Figure 7.61

Site 22IT576: Selected Preforms from the Early Archaic assemblages

a. Assemblage A: Preform I (3979)
b. Assemblage A: Preform II (4119-1)
c. Assemblage A: Preform II (3823-1)
d. Assemblage B: Preform I (5265-1)
e. Assemblage B: Preform I (4562-1)
f. Assemblage B: Preform II (4382-1)
g. Assemblage B: Preform II (5299-1)
h. Assemblage B: Preform II (5772-1)
i. Assemblage B: Preform II (5264-1)


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Figure 7.62

Site 22IT576: Selected Biface Blades

a. Triangular biface blade on a flake (3493-1)
b. Triangular biface blade on a flake (933-24)
c. Triangular biface blade on other (1012-143)
d. Triangular biface blade on other (1000-265)
e. Narrow Triangular biface blade on other (1336-1)
f. Narrow Triangular biface blade(1299-1)
g. Ovoid biface blade on other (1281-37)
h. Ovoid biface blade on a flake (1118-50)
i. Rehafted Biface blade on other (710-32)

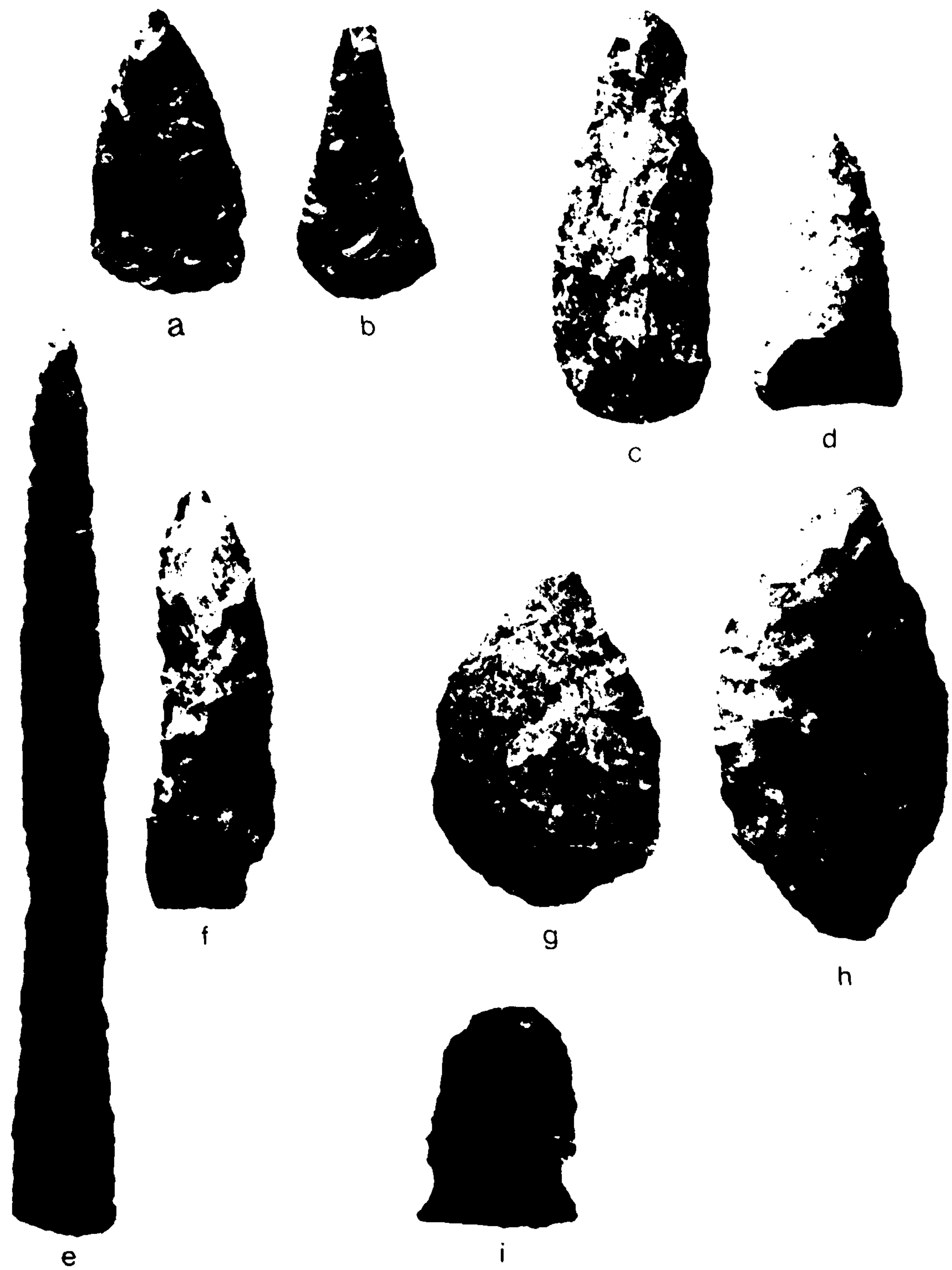
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Figure 7.63

Site 22IT576: Quarry Blades

a. 812-6
b. 845-1
c. 843-1
d. 844-1
e. 846-1

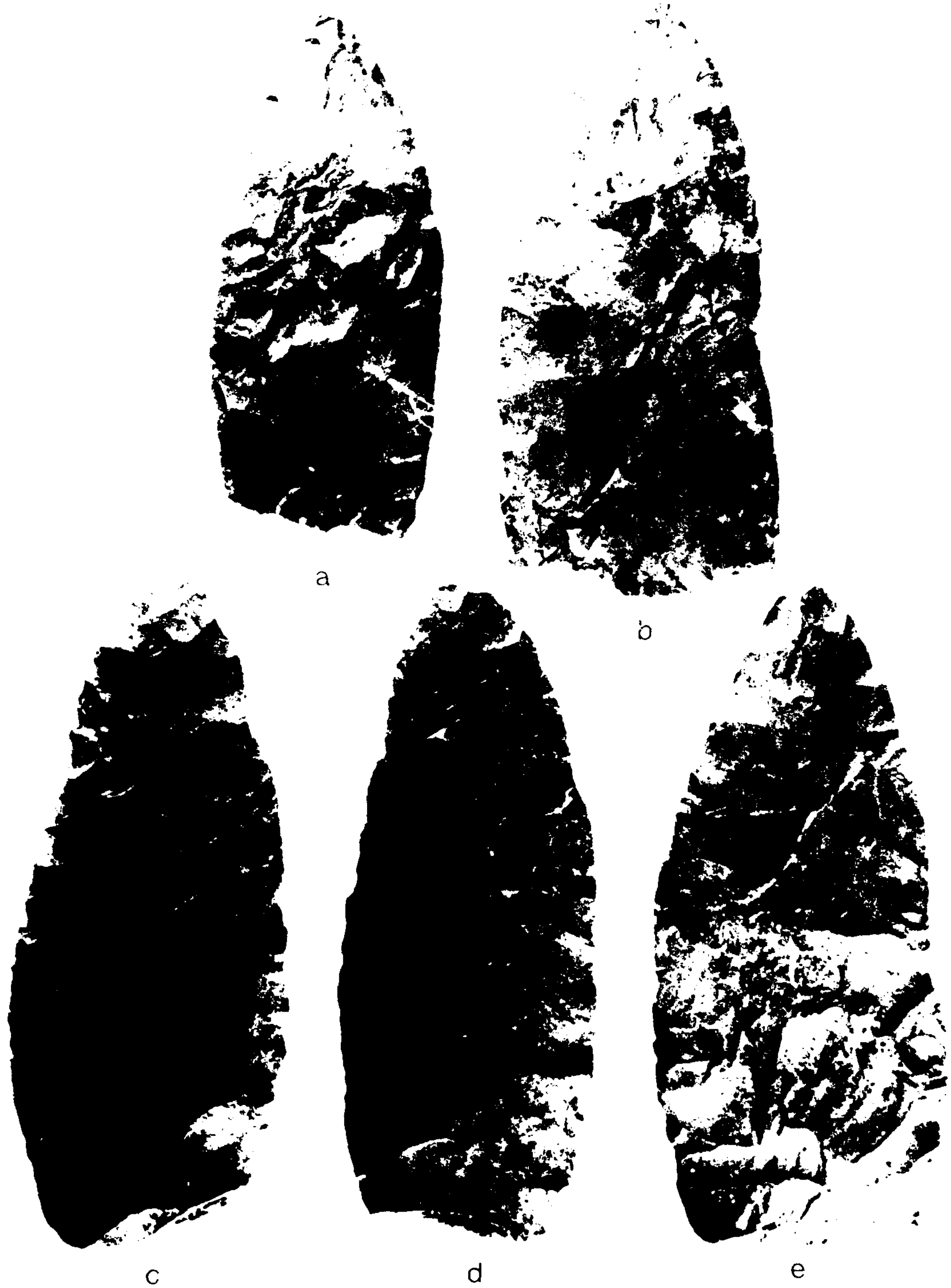
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Figure 7.64

Site 22IT576: Selected Biface Blades from the Early Archaic assemblage

a. Ovoid Biface Blade on a flake (3845-1)
b. Triangular Biface Blade, Proximal Fragment (4051-1)
c. Triangular Biface Blade (6305-1)
d. Ovoid Biface Blade on a flake (4338-1)
e. Biface Blade, Distal Fragment (5814-1)
f. Triangular Biface Blade on other (4796-1)
g. Ovoid Biface Blade (4796-1)
h. Biface Blade, proximal fragment (5296-1)
i. Biface Blade, proximal fragment (6062-1)
j. Biface Blade, proximal fragment (4543-1)
k. Triangular Biface Blade on a flake (4682-1)
l. Biface Blade, proximal fragment (5258-1)
m. Triangular Biface Blade on a flake (5812-1)


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Figure 7.65

Site 22IT576: Selected unifacial scrapers

a. Uniface end scraper on a blade-like flake (3456-1)
b. Uniface end scraper on an expanding flake (3501-2)
c. Uniface end scraper on other flake (3496-1)
d. Uniface end scraper on expanding flake (3271-34)
e. Uniface end scraper on expanding flake (3608-1)
f. Uniface end scraper on expanding flake (3608-1)
g. Uniface end scraper on expanding flake (3529-3)
h. Uniface end scraper on expanding flake (3685-2)
i. Uniface end scraper on expanding flake (3883-1)
j. Uniface side scraper on expanding flake (333-4)
k. Uniface side scraper on other flake (681-55)
l. Uniface side scraper on other flake (1634-2)
m. Uniface side scraper on expanding flake (1138-34)
n. Uniface side scraper on other flake (3529-4)
o. Uniface side scraper on blade/blade-like flake (3545-1)
p. Uniface side scraper on other flake (1069-41)
q. Uniface side/end scraper on other flake (1455-5)
r. Uniface side/end scraper on other flake (812-8)
s. Uniface side/end scraper on blade-like flake (3271-2)
t. Uniface side/end scraper on other flake (1480-19)

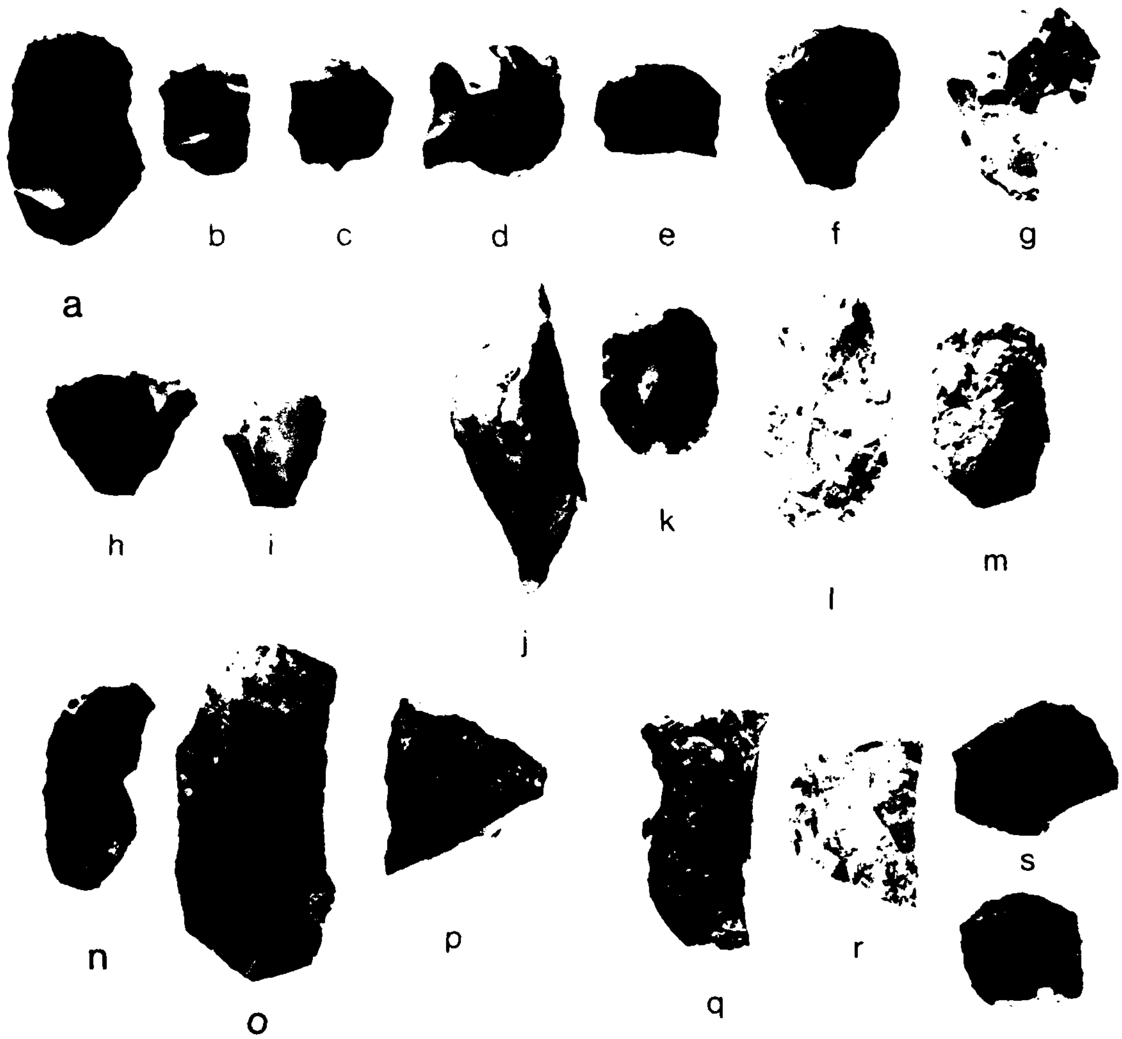
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Figure 7.66

Site 22IT576: Miscellaneous chipped stone implements from the Early Archaic assemblages

a. Uniface end scraper on expanding flake (4003-1)
b. Uniface side/end scraper on other flake (4059-1)
c. Uniface end scraper on other flake (5026-1)
d. Uniface end scraper on expanding flake (4278-1)
e. Uniface side scraper on expanding flake (4327-1)
f. Uniface end scraper on expanding flake (4548-1)
g. Uniface end scraper on expanding flake (5457-1)
h. Uniface side scraper on other flake (5454-1)
i. Uniface side scraper on other flake (5959-1)
j. Uniface side scraper on expanding flake (4478-1)
k. Notched flake/spokeshave (4563-1)
l. Notched flake/spokeshave (5462-1)
m. Uniface side scraper on other flake (4359-1)
n. Core fragment (4295-1)
o. Spokeshave/Biface side scraper (5969-1)
p. Scraper, other (5290-1)
r. Hafted biface/end scraper (5737-1)
s. Uniface hafted end scraper (4858-1)
s. Uniface end scraper on other flake (5655-2)
t. Perforator (4856-1)
u. Uniface side scraper on other flake (4274-1)


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Figure 7.67

Site 22IT576: Selected Drills

a. Shaft drill (862-24)
b. Shaft drill (976-79)
c. Shaft drill (825-6)
d. Shaft drill (2838-116)
e. Shaft drill (672-557)
f. Shaft drill (1852-20)
g. Expanding base drill (681-56)
h. Expanding base drill (3920-1)
i. Expanding base drill (1218-56)
j. Expanding base drill (660-14)
k. Expanding base drill (3048-1)
l. Expanding base drill (1911-48)
m. Expanding base drill (1213-23)
n. Expanding base drill (1956-8)
o. Expanding base drill (1186-71)
p. Expanding base drill (3333-5)
q. Expanding base drill (665-117)
r. Expanding base drill (3229-2)
s. Expanding base drill (1501-62)

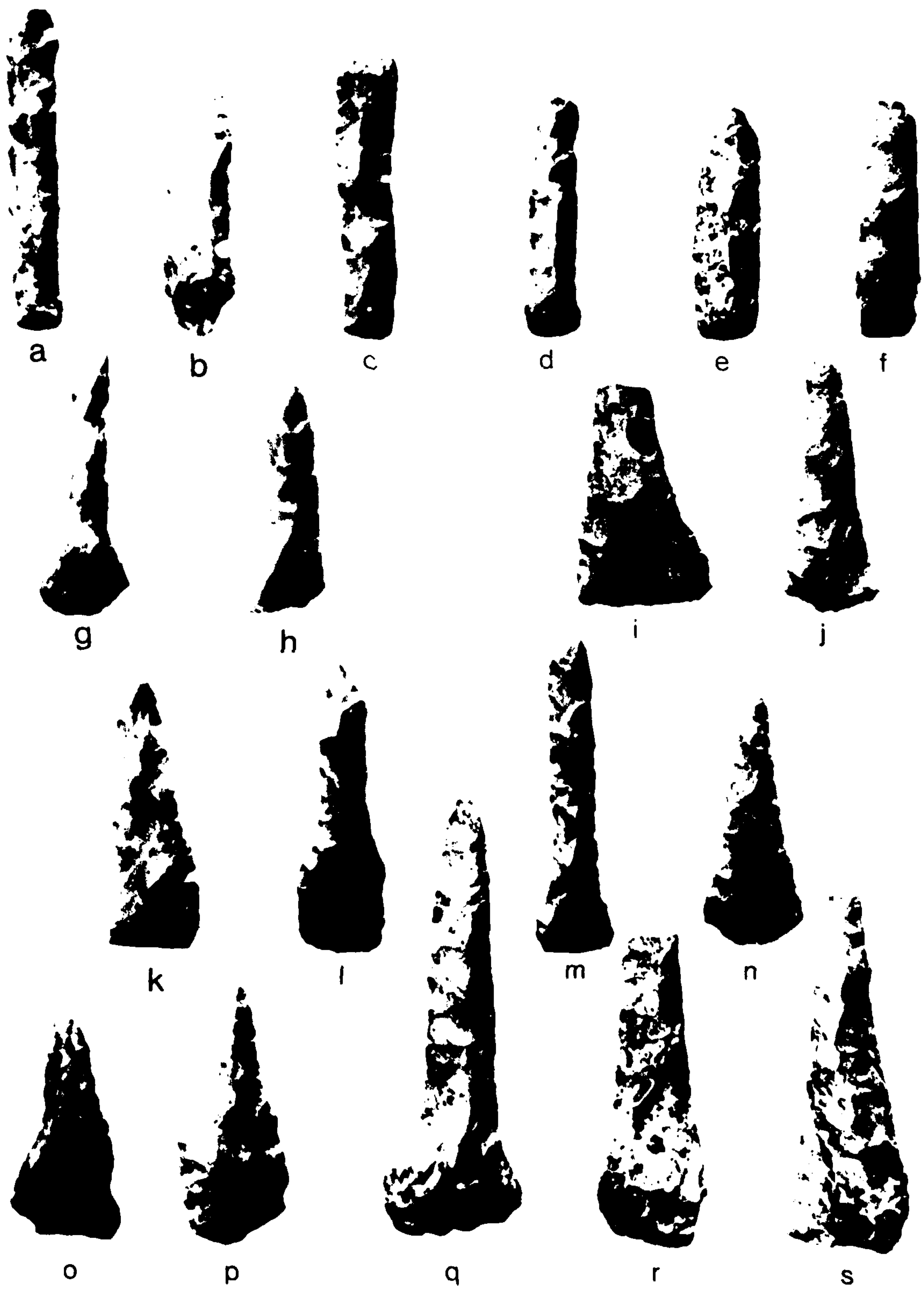
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Figure 7.68

Site 22IT576: Selected Drills, Reamers, and Perforators

a. Stemmed drill (1043-137)
b. Stemmed drill (1757-9)
c. Stemmed drill (1258-47)
d. Stemmed drill (1671-19)
e. Stemmed drill (1076-89)
f. Stemmed drill (1259-160)
g. Stemmed drill (1024-1)
h. Stemmed drill (1069-42)
i. Stemmed drill 1250-1)
j. Stemmed drill (1220-1)
k. Stemmed drill (680-216)
l. Stemmed drill (779-1)
m. Stemmed drill (999-168)
n. Stemmed drill (889-1)
o. Reamer (1035-156)
p. Reamer (3839-5)
q. Perforator (recycled) (661-135)
r. Perforator (recycled) (3622-1)
s. Perforator (recycled) (1258-48)
t. Perforator (recycled) (677-37)
u. Perforator (recycled) (1639-44)

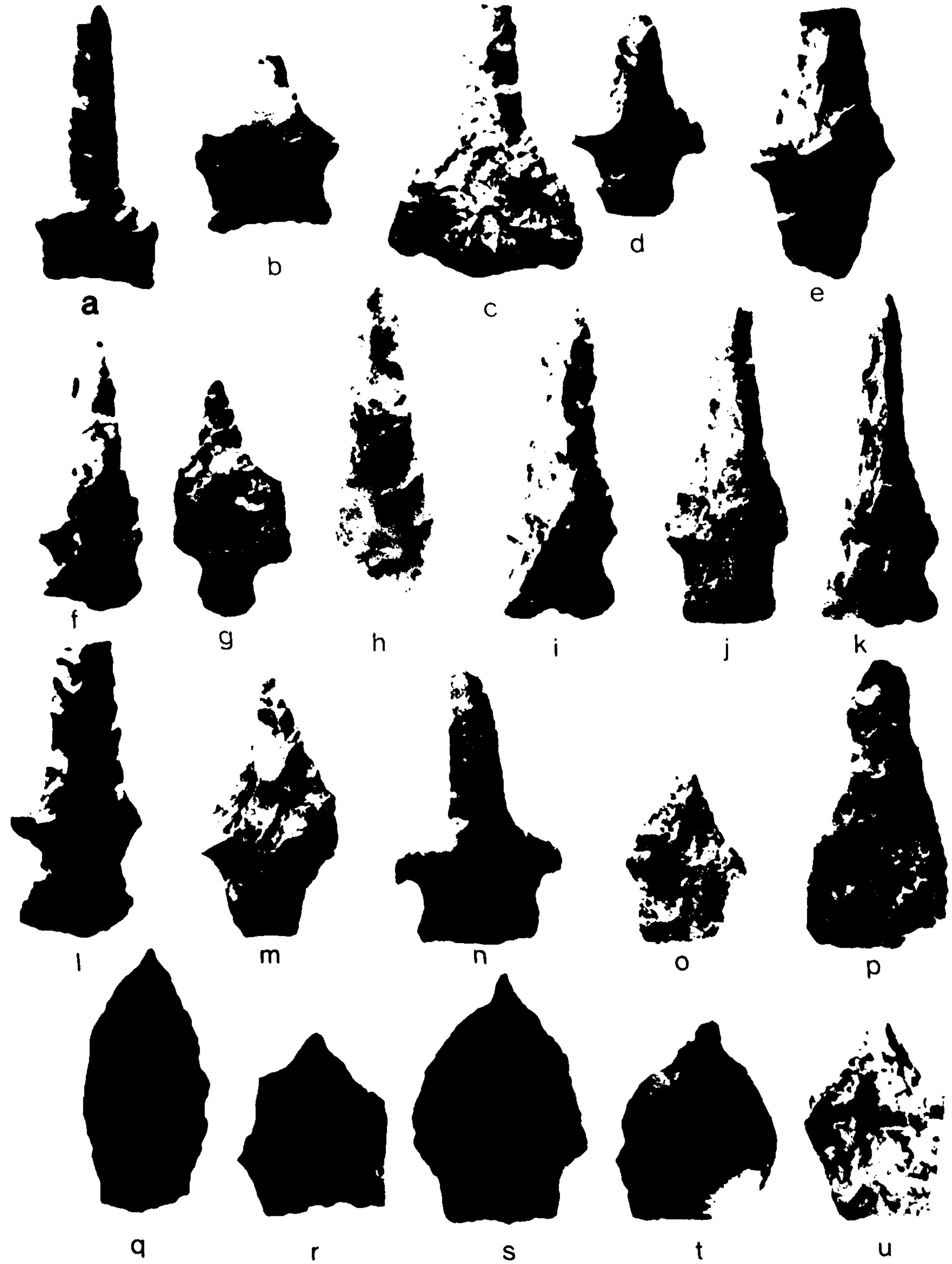
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Figure 7.69

Site 22IT576: Selected perforators, reamers, denticulates, and gravers

a. Perforator (1062-112)
b. Perforator (1911-50)
c. Perforator (1109-50)
d. Perforator (1432-19)
e. Perforator (1854-16)
f. Perforator (1129-14)
g. Perforator (1426-80)
h. Perforator (978-207)
i. Perforator (2654-1)
j. Reamer (948-302)
k. Reamer (2476-3)
l. Reamer (2541-10)
m. Denticulate/perforator (676-129)
n. Denticulate (883-4)
o. Denticulate (1119-49)
p. Graver (1213)
q. Graver (1692-4)
r. Graver (1076-90)
s. Graver (1167-4)
t. Graver (2998-10)
u. Graver (1501-72)

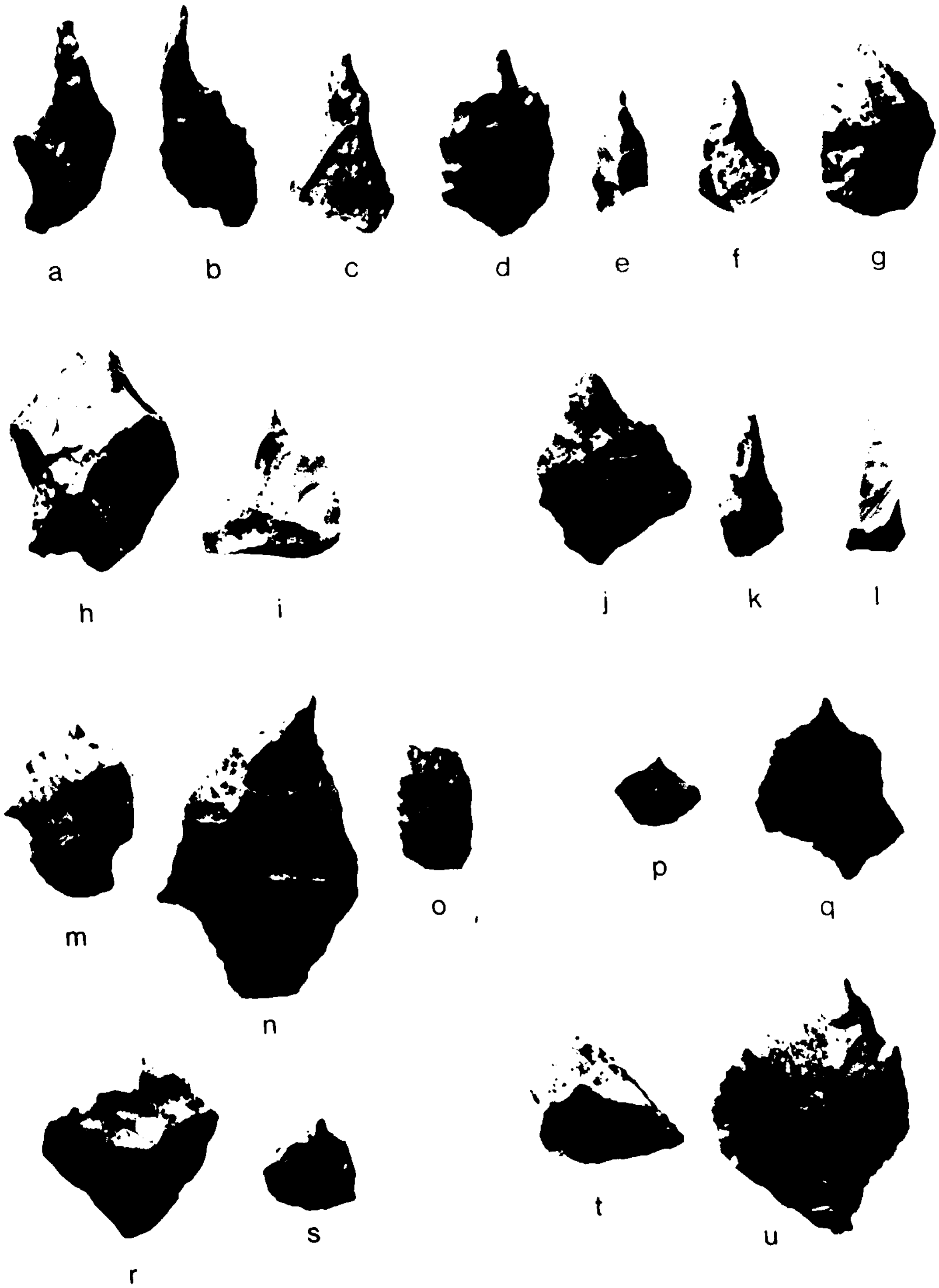
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Figure 7.70

Site 22IT576: Selected Microliths, micro-perforators, and chipped axe

a. Microlith (3229-4)
b. Microlith (2850-7)
c. Microlith (2731-9)
d. Microlith (3277-4)
e. Microlith (3705-4)
f. Microlith (2850-8)
g. Microlith (2601-7)
h. Microlith (2850-9)
i. Microlith (3384-3)
j. Microlith (333-6)
k. Microlith (3401-2)
l. Micro-perforator (1623-2)
m. Micro-perforator (1744-13)
n. Micro-perforator (1833-17)
o. Micro-perforator (3256-7)
p. Micro-perforator (1651-8)
q. Micro-perforator (2731-10)
r. Micro-perforator (2014-6)
s. Micro-perforator (2738-3)
t. Chipped axe (711-215)

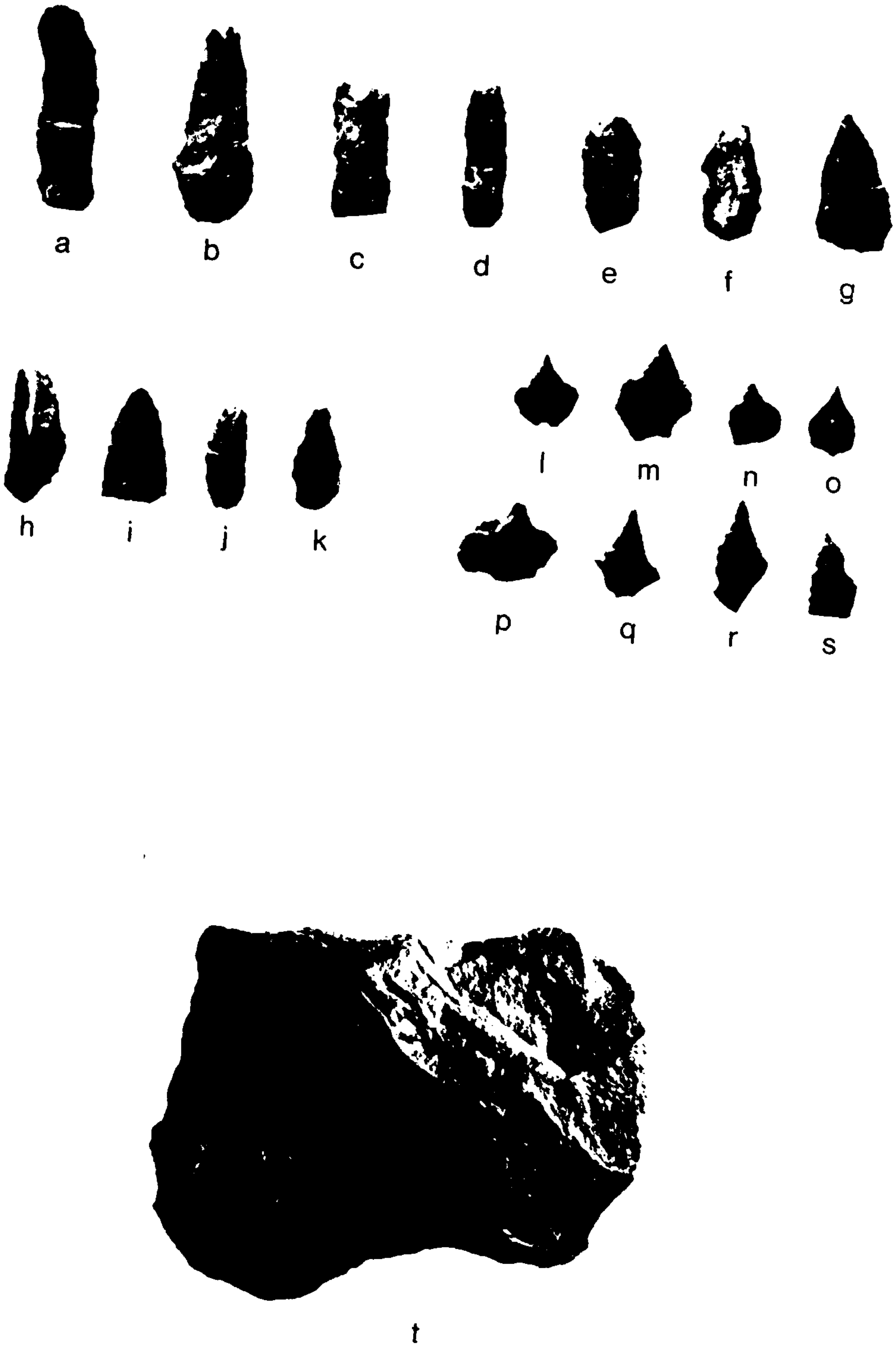
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Figure 7.71

Site 22IT576: Selected digging implement and choppers

a. Bifacial digging implement (1327-61)
b. Biface chopper (1150-137)
c. Biface chopper (983-216)
d. Biface chopper (3218-21)
e. Biface chopper (819-7)
f. Uniface chopper (2540-1)
g. Uniface chopper (1325-76)
h. Biface chopper (946-215)
i. Biface chopper/scraper (2794-1)
j. Biface chopper/scraper (1327-60)


a
b
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Figure 7.72

Site 22IT576: Selected Biface Flake Knives

a. 691-54
b. 682-66
c. 1212-169
d. 957-78
e. 804-6
f. 3795-1
g. 1047-313
h. 6402-1

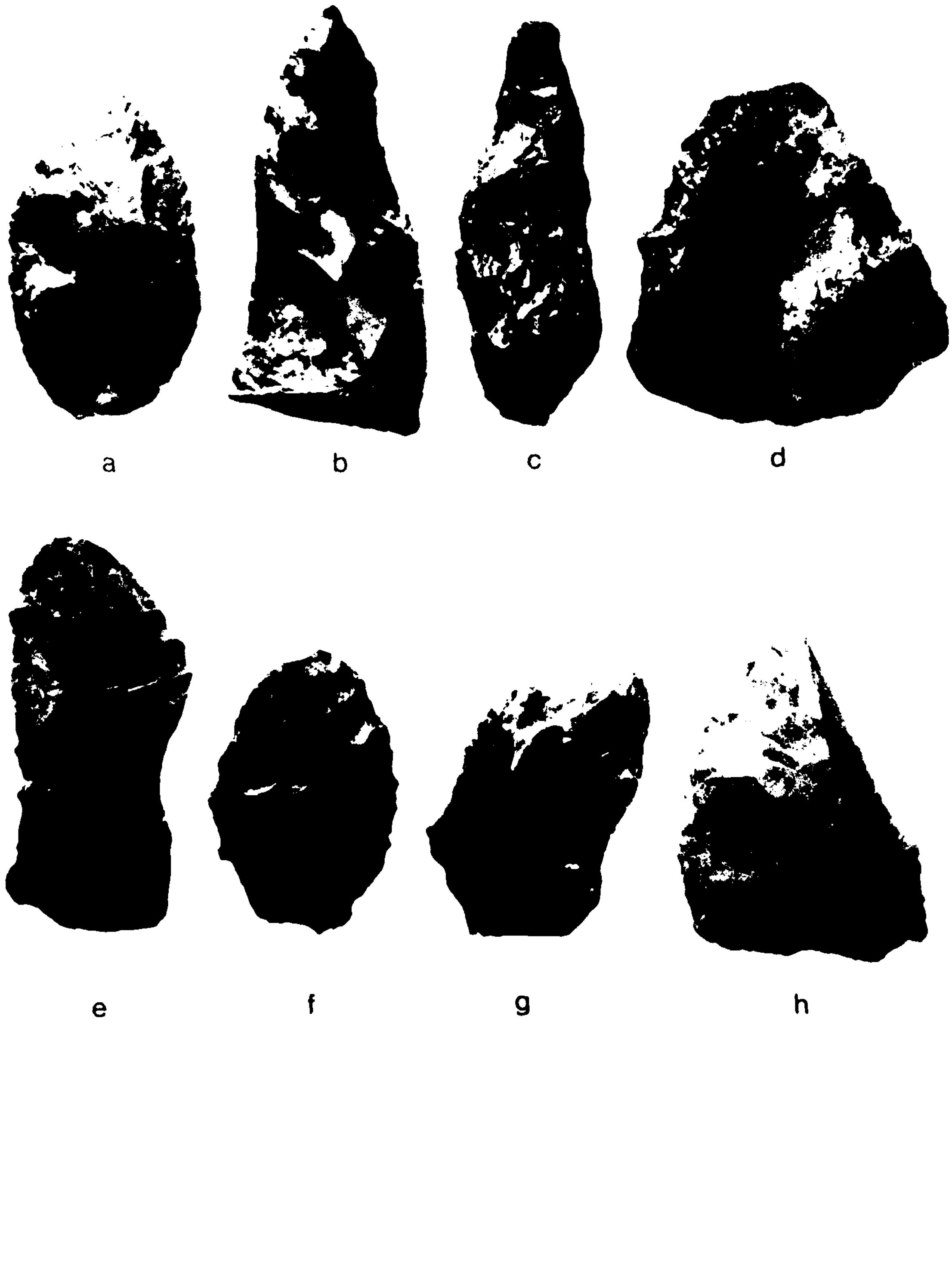
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Figure 7.73

Site 22IT576: Selected Other Unifacial and Bifacial Tools

a. Biface wedge (1285-16)
b. Biface wedge (3229-3)
c. Biface wedge (3635-1)
d. Biface wedge 1503-69
e. Biface cobble knife (728-29)
f. Biface cobble knife (1201-1)
g. Uniface adze on a flake (736-38)
h. Biface adze (1624-32)
i. Biface adze (711-201)
j. Biface adze (1610-3)
k. Chisel (2226A-1)

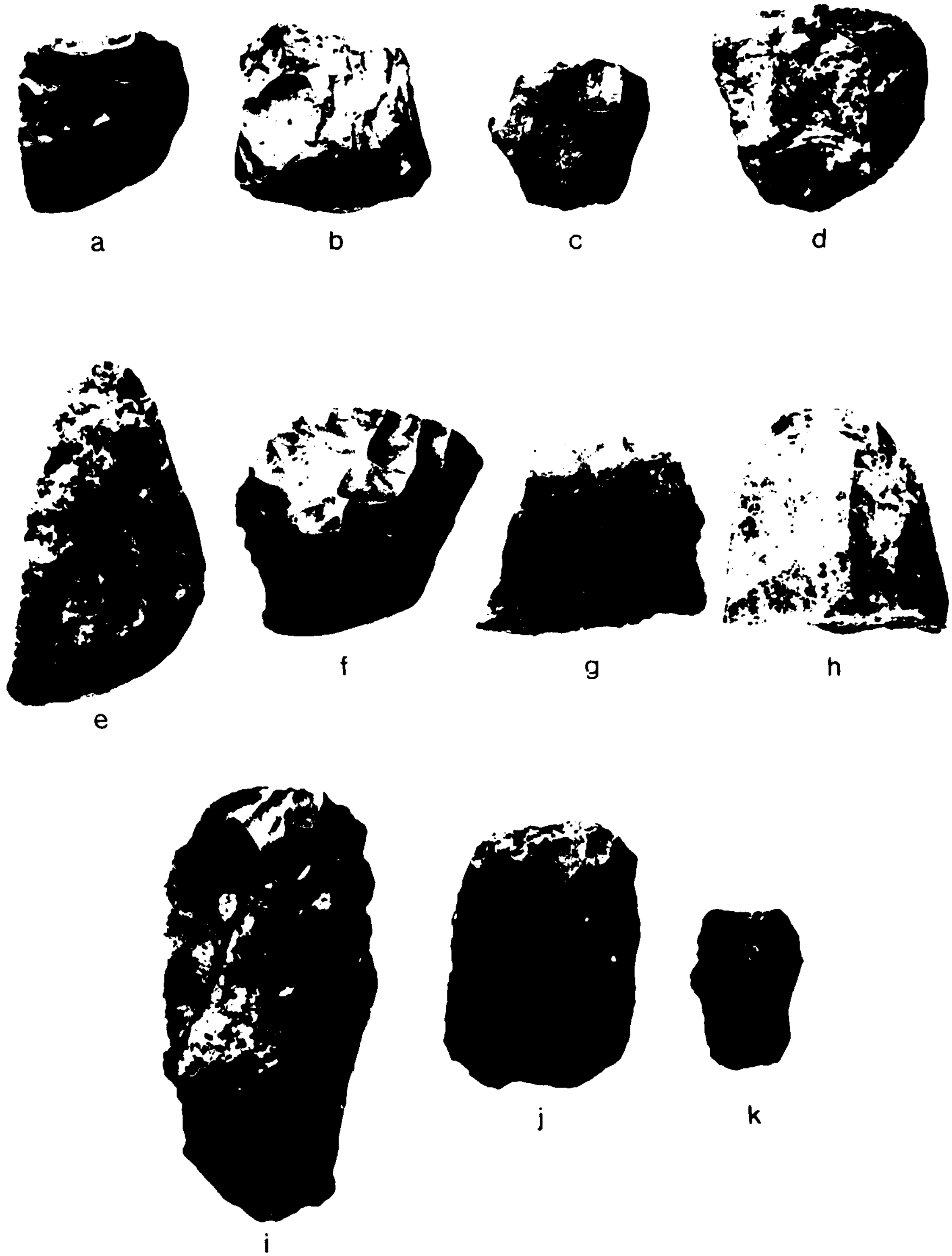
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Figure 7.74

Site 22IT576: Selected Other Uniface and Biface Tools from the Early Archaic assemblages

a. Uniface flake knife (4042-1)
b. Uniface flake knife (4168-1)
c. Uniface flake knife (5622:1)
d. Uniface flake knife (5335-1)
e. Uniface flake knife (4794-1)
f. Uniface flake knife (5284-1)
g. Uniface flake knife (6076-1)
h. Uniface flake knife (4560-1)
i. Uniface flake knife (5587-1)
j. Uniface flake knife (3916-1)
k. Biface flake knife (3894-2
l. Splintered wedge (Piece esquille) (5450-1)
m. Splintered wedge (Piece esquille) (4429-1)
n. Biface adze (3982-1)
o. Biface adze (4848-1)
p. Biface adze (3824-1)


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Figure 7.75

Site 22IT576: Selected Abraders and Anvilstones

a. Abrader (5830-2)
b. Abrader (881-4)
c. Abrader (672-95)
d. Abrader (2933-1)
e. Anvilstone (3217-1)
f. Anvilstone (701-36)
g. Anvilstone (1417-1)


a
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Figure 7.76

Site 22IT576: Selected celts and hammerstones

a. celt fragment (702-158)
b. hammerstone, cobble (2027-1)
c. hammerstone, spherical (981-1)
d. hammerstone, bifacial (1300-62)

a

b

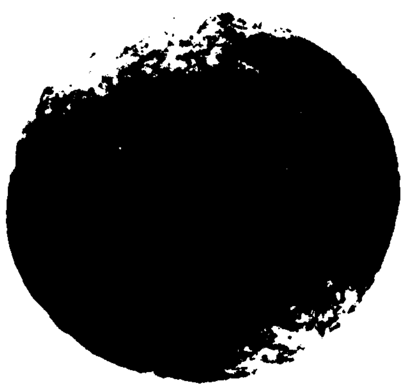

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Figure 7.77

Site 22IT576: Selected Ground Stone Tools

a. Muller (1253-1)
b. Mortar (3860-1)
c. Pestle (756-28)
d. Metate (2931-1)

a

b

c

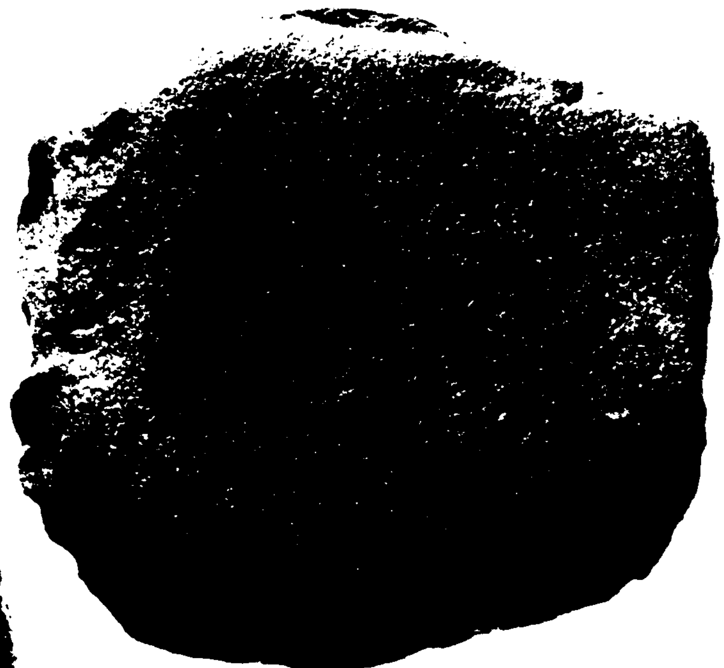

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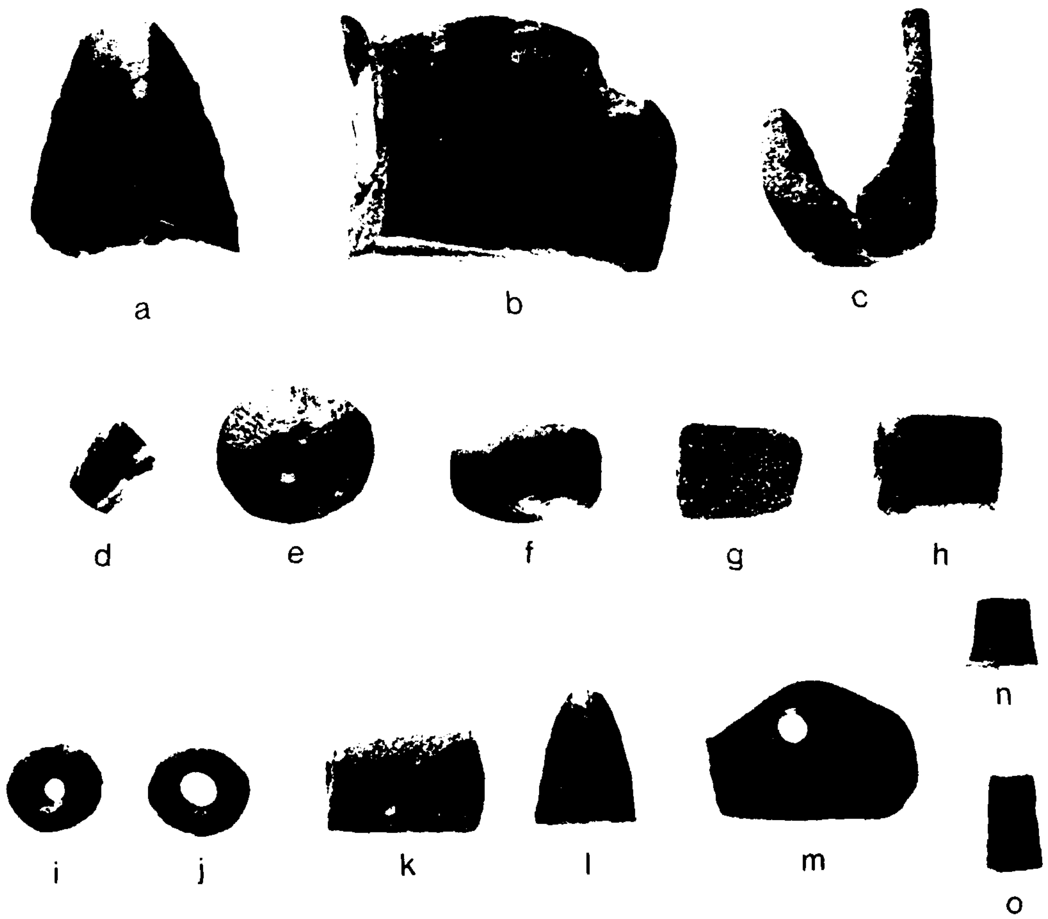
Figure 7.78

Site 22IT576: Selected Ground Stone Tools

a. Atlatl weight (2889-5)
b. Atlatl weight (3485-1)
c. Boatstone (3485-1)
d. Bead preform (949-262)
e. Bead Preform (1042-200)
f. Bead Preform (1191-57)
g. Bead Preform (1629-48)
h. Bead (883-11)
i. Bead (1300-67)
j. Bead (1522-3)
k. Bead (842-7)
l. Gorget (1629-43)
m. Gorget (1029-96)
n. Drill core (1573-10)
o. Drill core (j2780-7)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CHAPTER 8

EXCAVATIONS AT THE ILEX SITE: 22IT590

INTRODUCTION

SITE IDENTIFICATION

The Ilex site (22IT590) is a deeply stratified, multicomponent midden deposit located in northern Itawamba County, Mississippi. The site was recorded during the initial survey of the canal section of the Tennessee-Tombigbee Waterway (Blakeman 1976:19). Blakeman (1976:73-74, 30-31, 41-42) considered 22IT590 to be a significant site based on the presence of Transitional Archaic/Woodland, Miller II-III, and Mississippian components identified from an analysis of surface debris. Subsequent test excavations at the Ilex site were conducted by the University of Alabama in 1979 (Bense 1979b, 1982:426-431). The purpose of this investigation was to determine the existence of undisturbed cultural materials, features, strata, or remains (Bense 1979, 1982:428). The analysis of cultural materials recovered during the testing program provided evidence of mixed Gulf Formational, Woodland, and Mississippian components in the upper 20-40 cm of the deposit. In addition, Late Archaic and Middle Archaic components were thought to be present below the Gulf Formational horizon (Bense 1979, 1982:430). Features and "other remains" were identified during testing and the integrity of the combined data sets provided the basis for recommending additional excavations at 22IT590 (Bense 1979b, 1982:431).

PHASE I FIELDWORK

Following the recommendations developed during the Alabama testing program, the Ilex site was included for further investigation during the Phase I program conducted by the University of West Florida. Phase I excavations at 22IT590 were initiated in compliance with a scope-of-work issued by the Mobile District, U.S. Army Corps of Engineers. Fieldwork commenced in October 1980 and ended in February 1981.

RESEARCH RATIONALE

The Alabama testing program (Bense 1979, 1982) provided evidence of the integrity of remaining cultural deposits at 22IT590, the wealth and diversity of the components represented, and the research potential of the site. The rationale for additional excavations at Ilex focused on the need to obtain additional data on the poorly documented culture history of the Upper Tombigbee Valley (UTV) during the Phase I investigation. The recommendations for further work and the proposed excavation design were

developed in light of pending destruction of the site during construction of Lock E on the Tennessee-Tombigbee Waterway.

SITE DESCRIPTION

LOCATION

The Ilex site is located in extreme northern Itawamba County, Mississippi, approximately 20.5 km, at a bearing of ca. 10 ° east of north, from the county seat of Fulton (Figure 8.1).

The Prentiss County line lies 0.5 km north of the site and the junction of Itawamba, Prentiss, and Tishmingo counties is 4 km to the east. Mackeys Creek flows approximately 50 m to the north of the site. The Pharr Mounds (Bohannon 1972) located along the Natchez Trace are 4.8 km west of the Ilex site.

Legal Description

The Ilex site is in the SE/SW/NW/NE 1/4 of Section 20, Township 7S, Range 9E, Fulton N.E., Mississippi Quadrangle (U.S.G.S., 7.5 minute series). The Universal Transverse Mercator Grid coordinates for the site are Zone 16, Easting 374200, Northing 3813950, and the geographic coordinates are longitude 34 ° 27'40" N, latitude 88 ° 22'12" W.

Tennessee-Tombigbee Waterway Project Setting

The proposed location for Lock E of the Tennessee-Tombigbee Waterway Canal Section is approximately 270 m northeast of the Ilex site. The canal below Lock E will run adjacent to the north end of the site.

LOCAL ENVIRONMENT

Physiography

The Ilex site (Figure 8.1) is located on and in a terrace at the juncture of the southern valley wall and floodplain of the Mackeys Creek valley (Figure 8.2). The relatively flat terrace containing the cultural deposits was connected to the high Pleistocene ridge to the south prior to lateral dissection by a small drainage in recent history. The site was bounded to the

north by Mackeys Creek before construction activity destroyed a large section of the site in this area (Figure 8.2). A small, unnamed drainage lies immediately west of the site. The Ilex site is bisected by a road which affords access to Mackeys Creek.

The terrace containing the site deposits rises 2-3 m above the valley floor. The terrace deposits consist primarily of fluvial and colluvial sands. Slumping, sheet erosion, and mass movement of sediments off the Pleistocene ridge on the south end of the site appear to have made a significant contribution to formation of the terrace. Additional information on the site history is presented later in this chapter.

Historic Land Use

The Ilex site area was planted in cotton during the first part of the 20th century and was changed to loblolly pine, during the 1950's. A dense pine plantation and thick understory growth comprised the site vegetation at the start of Phase I investigations.

Other disturbances of the terrace included road construction, removal of the entire northern section of the terrace during waterway-related construction, and extensive, random digging by relic hunters. Construction activity at the site exposed the dark-colored cultural midden, making it highly visible in the surrounding landscape. Such exposure of the cultural deposit no doubt accelerated relic collecting and digging. At the start of Phase I excavations, the terrace surface was pockmarked with "potholes," further complicating the placement of large block excavation units. The intensity and persistence of relic hunters at 22IT590 ultimately resulted in the posting of a permanent guard at the site including all non-working hours, each weekend, and holidays.

There is evidence in the form of informant testimony and discarded supplies/equipment to suggest that a sawmill was located on or near the site. The exact placement, years of operation, and possible impacts on the site from this activity are unknown.

Plant and Animal Communities

Plant and animals in the vicinity of 22IT590 are varied and abundant. Modern vegetation in the area includes a secondary growth of oak-hickory and a complementary understory on the adjacent uplands and a dense riparian community along Mackeys Creek

and tributary drainages. As noted above, the site vegetation consisted of a loblolly pine plantation and thick understory at the start of Phase I investigations (Figures 8.3-8.6).

The environment surrounding 22IT590, although significantly altered today, most likely would have provided abundant plant and animal resources throughout the span of prehistoric occupations. Species available for historic and prehistoric exploitation probably included a variety of seeds, fruits, nuts, berries, legumes and herbaceous plants, as well as deer, bear, wild turkey waterfowl, birds, quail, rabbits, squirrels, foxes, and raccoon. Chapter 4 of this report presents a detailed list of plant food resources in the floodplain, low terraces and uplands of the Upper Tombigbee Valley. Additional information on the genera and species of flora and fauna represented in the area is provided in Chapter 4 of this report and the Supplemental Environmental Impact Statement (1982) prepared for the Tennessee-Tombigbee Waterway (Canal Section).

EXCAVATION STRATEGIES

RESEARCH OBJECTIVES

The purpose of the 1980-1981 excavations at 22IT590 was to provide information on the cultural components represented and to correlate data on the occupations to other sites in the Phase I program. In turn, data on the combined Phase I excavations would be used to establish a preliminary cultural chronology and culture history for the UTV. Accordingly, excavations at 22IT590 were to focus on those segments of the cultural sequence that were poorly represented in the Phase I site investigations previously completed.

Prior investigations at 22IT590 (Blakeman 1976:73-74; Bense 1979, 1982: 429-430) provided evidence of a long history of cultural occupations at the site. During the initial stages of Phase I fieldwork, the cultural sequence at the Ilex site was extended through the recovery of Early Archaic artifacts. This discovery coupled with the confirmation of extensive mixing of cultural materials in the ceramic-bearing horizons (ca. upper 40 cm of the deposit) precipitated a change in recovery strategies. After close consultation of the project staff and the contracting officer of the U.S. Army Corps of Engineers (Mobile District), emphasis was shifted from the recovery of a representative sample of all cultural occupations present to an expanded sampling of the Early Archaic and Middle Archaic horizons. The lower levels of the deposit containing artifacts representative of the earliest periods of occupation were considered to be relatively less disturbed than the upper levels of the site. Samples were

obtained, however, from all excavated levels of the cultural deposit for descriptive and comparative purposes. As will be described below, large segments of the excavated area at 22IT590 were stripped down to a level immediately above the estimated occurrence of Middle Archaic occupations. Controlled excavations were initiated from that point through the Early Archaic levels.

The decision to center excavation effort on these lowermost components reflected a desire to expand the data base on early settlement of the UTV. Middle Archaic and Early Archaic components in stratigraphic context are infrequent occurrences in this region. Correspondingly, the loss of such information was considered to be of greater significance than an equivalent loss of information from post-Middle Archaic occupations at 22IT590. The extensive disturbance of the uppermost levels also had a bearing on the development of the excavation strategy at the Ilex site.

METHODS AND TECHNIQUES

Recovery Strategy and Procedures

A preliminary excavation strategy was developed to guide the initial Phase I work at the Ilex site. The experience gained in the excavations of the Walnut and Poplar sites (22IT539 and 22IT576, respectively) prompted the development of a strategy which differed markedly from that employed to excavate those sites.

Excavations at other sites in the UTV indicated that the previously reported testing data (Bense 1979a, 1979b, 1979c, and 1982) were not adequate to determine the placement of large excavation units to maximize information return.

The preliminary excavation strategy at Ilex was developed to provide an empirical basis for orientation of the site excavation and the placement of large block units. The major aspects of this excavation strategy were:

1. Backhoe excavation of stratigraphic trenches to expose representative profile transects of the site.

2. Hand excavation of 1 m x 1 m test units placed adjacent to the stratigraphic trenches. This procedure was developed in order to correlate cultural and natural strata and to appraise the integrity of the site.

3. Hand excavation of 1 m x 2 m test units to examine the continuity of cultural and natural strata in areas away from the stratigraphic trenches.

4. Visual coring on an 8 m grid pattern to identify and correlate major stratigraphic units across the site and to isolate visual anomalies in the stratigraphic sequence.

Three stratigraphic trenches were planned as part of the preliminary strategy; two additional trenches were excavated later in the field season. These trenches were placed parallel to the north-south road (Numbers 1 & 2) through the eastern part of the site and along the truncated northwestern edge of the site (Figure 8.7). A shorter trench (Number 3) transected the southern part of the site and the two later trenches (Numbers 4 & 5) cross at central and southwestern sections of the site. This distribution of trenches was devised to cross section the deeper deposits at the site while leaving undisturbed the majority of the central site area. The recent truncation of the northern part of the site and the road through the site effectively positioned these trenches in the geographic center of the original site boundaries. The trench walls were cleaned and profiles drawn soon after excavation. On-site study and consultation with the project soils and site genesis consultant provided rapid feedback on the formational history of the Ilex site prior to and during the excavations.

Twenty test units were planned for excavation as a preliminary investigation strategy, twelve adjacent to stratigraphic trenches and eight scattered throughout the site. Excavation was in arbitrary 10 cm levels in all but one of the test units. This unit (T.P. 1) was excavated according to strata identified through a detailed description of an adjoining section of Stratigraphic Trench 2.

Chemical coring techniques were not employed at 22IT590. Results of chemical core sampling at the Walnut and Poplar sites were inconclusive as no correlaton of chemical anomalies and cultural remains was established at these sites. The potential for improved results at 22IT590 were considered low and this procedure was not conducted. Also, the extremely time-consuming visual coring programs employed at Poplar and Walnut were not considered appropriate for Ilex. The stratigraphic trenches and test units, supplemented by a 8 m visual coring grid, provided more useful information than both the chemical and visual coring techniques were determined to offer.

During implementation of the preliminary excavation strategy, plans were developed for the ongoing investigation of the site. The strategy for subsequent excavations stressed problem-oriented research. The pragmatic placement of excavation units to address specific research problems was facilitated by the preliminary investigations at the site.

As noted above, excavation strategy eventually stressed the early components at the Ilex site. However, evidence for all cultural components encountered was scrutinized in an attempt to determine the relative integrity of recovered materials and their interpretive significance. The pragmatic nature of this strategy facilitated rapid feedback, evaluations, and shifts in excavation priorities.

Excavation procedures employed at 22IT590 generally parallel those described for other Phase I sites (this report). A standard Cartesian grid was established on the site and all excavations and prominent natural features were tied to N-S/E-W coordinates. Excavations generally were conducted in arbitrary 10 cm levels, although 5 cm levels were utilized late in the field season to provide finer separation of the Early Archaic occupations. Unfortunately, time limitations did not permit consideration of cultural material distributions within these 5 cm levels in the present report; this remains to be accomplished during future studies.

All general level fill was waterscreened through 0.63 cm (0.25 inch) mesh hardware cloth and flotation samples were extracted from control squares and features. Other aspects of the field procedures employed at 22IT590 are described in Appendix 4; attendant lab procedures are described in Appendix 3.

Mechanical (Figures 8.8 and 8.9) and hand stripping were employed throughout the Phase I investigation to facilitate rapid removal of overburden, excavation of stratigraphic trenches, and exposure of large subsurface areas of the site. Some clearing of site vegetation also was accomplished through the use of mechanized equipment. The decision to examine as large a subsurface area as possible was considered worthwhile in view of the scheduled destruction of the site. The Ilex site subsequently was destroyed during construction of Lock E in the spring of 1981.

The final plat of Phase I investigations is presented in Figure 8.7. The excavations at Ilex included five stratigraphic trenches, 11 block excavation units, one 2 m x 2 m unit (subsequently designated Block J), and 20 test pits. More specific information on the controlled excavation units is provided in Table 8.1. Included in this table is the description of Master Block which is an analytical unit combining six excavation blocks in the central excavation area (Figure 8.7). Master Block was defined to accommodate description and interpretation over a large excavation area and is discussed later in this chapter.

The wealth of information obtained during the Phase I investigations at the Ilex site are described and summarized in following sections of this chapter. The sheer volume of data generated from this investigation will require a more thorough analysis

than was possible in the time allotted for the present study. Research conducted in the years to come will necessarily involve reanalysis, as well as further analysis, of the data sets from 22IT590. A major objective of the present study is to outline research problems for future investigations. The data and interpretations presented in this report are preliminary, but provide a first level ordering of the 22IT590 data that can only be modified, to any significant degree, through protracted study.

STRATIGRAPHY

SOILS AND SEDIMENTS

Uplands

The steep valley walls (25-35%) and uplands adjoining the site to the south are comprised of the Smithdale association, hilly. Smithdale soils (Figure 8.10) are characterized by distinctive red subsoils and well-defined argillic horizons (Bt) of high clay content (up to 35%). These soils are deep, well-drained, and permeable. The argillic horizons have subangular blocky structure and oriented clay skins on ped surfaces. The upland soils are strongly acid, highly weathered, and siliceous with low base saturation levels (Ultisols).

Floodplain

Kirkville amd Mantachie soils comprise the floodplain deposits of Mackeys Creek valley adjacent to 22IT590. These soils are Dystrochrepts and Fluvaquents which exhibit only minimal soil development. The floodplain soils are strongly acid and have cambic B horizons characterized by little or no eluviation or illuviation. These soils are typically yellowish-brown in color at the surface with gray, light gray, or pale brown subsoils. Subsoil textures are loamy, but vary from sandy loam to silty clay loam.

Site

The culturally-altered soils of the site developed in loamy, fluvial, siliceous sediments. These soils are readily distinguished by very thick, humus-rich, dark reddish brown epipedons (surfaces) which are produced by prolonged cultural activity and occupation (Figure 8.11). The prehistoric occupation of the site has drastically altered normal pedogenic features of color,

structure, consistency, horizonation, organic matter content, and certain chemical parameters. The soils comprising the upper 1 m of terrace deposits is uniquely distinct and differs greatly from adjacent soils of the region.

Large populations of earthworms, crawfish, rodents, and other diverse microfauna and microflora thrive in the organic-rich mound. The terrace is elevated above the adjacent floodplain of Mackeys Creek and provides an excellent habitat for diverse biota as it is well-protected from seasonal wetness. Extensive bioturbation has mixed the upper 1 m of deposit and affected normal pedogenic development. The dark humic color of the cultural midden (ca. upper 1 m) also masks the natural horizonation (Figure 8.12).

Physical

Munsell colors for the midden deposit at 22IT590 generally are dark reddish brown or a hue of 5YR, but can range from hues of 7.5YR (dark brown) to 10YR (strong brown). These colors contrast markedly with the yellowish subsoils of the floodplain and the reddish hues of the upland ridge to the south of the site. Below approximately 1 m, midden staining in the central site area fades and soil colors become distinctively lighter in color (10YR).

The dark-colored cultural midden has a "greasy" feel when rubbed between the fingers, most likely reflecting elevated organic matter content.

The site matrix consists of fluvial sediments deposited by Mackeys Creek and a small stream that drains the uplands west of the site boundary. Sands predominate in the site/terrace deposit but are intermixed with colluvial materials derived from the Pleistocene ridge south of 22IT590. The sand fraction is in the fine to medium range (Table 8.2) which is somewhat coarser than the sands found at the Walnut and Poplar sites. The gradient of Mackeys Creek is steeper than the Tombigbee River which accounts for the relatively higher energy fluvial deposition at 22IT590.

Stratigraphic profiles vary across the terrace (Figure 8.13), reflecting changes in cultural modification of the epipedon, as well as changes in depositional characteristics. The dark humic staining present on the north end of the site thins appreciably south of approximately the 100S grid line. This change corresponds to a decreasing intensity and/or duration of cultural activity in the latter area. Massive, undifferentiated sand horizons underlie the cultural midden wherever it occurs. The thickness of these sand units varies considerably, depending in part on the vertical extent of the overlying midden. A subsur-

face ridge of highly weathered sediments, oriented in a north-south direction, underlies the western margins of the site. This deposit was identified in Stratigraphic Trenches 4 and 5, and in Block C excavation unit (Figure 8.7). This deposit appears to represent a former terrace, possibly of Pleistocene age. Higher silt and clay fractions and gley colors characterize this terrace remnant. Overlying this deposit is an indurated B horizon that is characterized by strong reticulate mottling (Figure 8.13). Undifferentiated fluvial sand horizons overlie this stratum. The uppermost of these exhibits humic staining that grades into lower strata and decreases in thickness from north to south in exposed profiles. Pedogenic development is minimal in subsoil deposits across the terrace.

A correlaton of stratigraphic relationships across the site is provided in Figure 8.14. The recognition of a former terrace remnant and the lateral correlation of terrace strata provided relative ages for the deposits and included cultural materials. This information in turn was used to guide the ongoing excavation of 22IT590 through placement of block units in areas of high research potential.

Lamellae are common occurrences on the north end of the terrace below ca. 50 cm. These features appear as generally horizontal, dark-colored bands of variable thickness (Figure 8.12).

The distribution of lamellae appears to correspond to areas of the site with thick cultural midden deposits. The formation of lamellae most likely is the result of the eluviation of fines and illuviaton of these materials at the water table. The bands are composed of colloids which include higher clay and organic contents than surrounding matrices. The cultural midden clearly is the source of at least some of the clays and organics present in the lamellae at 22IT590. Further discussion of the relationship between lamellae and cultural activity is presented later in this chapter.

Chemical

Only limited data are available on the chemical profile of 22IT590 (Table 8.3). Organic matter content, not surprisingly, is highest between 0-15 cm in the Test Pit 1 sample (Table 8.3; Figure 8.7). From 15 cm to 116 cm below surface organic matter content remains relatively constant, ranging between 1.13% and 1.53%. Below 116 cm organic matter levels drop abruptly, corresponding to the gradual diffusion of the cultural midden in this area of the site.

Free iron oxides exceed 1% except for the 116-144 cm sample (0.67%). The distribution of total and organic phosphorus is variable and difficult to interpret. No relationship to clay content (Table 8.2) is apparent from this distribution.

Soil pH levels are uniform, ranging from a low of 4.9 at the surface to a high of 5.8. These values are higher than soil pH levels for adjacent areas of the floodplain.

The limited soil chemical data from 22IT590 are indicative of a long-term human presence, although the nature and intensity of cultural activity cannot be interpreted from a single suite of samples. Additional samples were recovered for future analysis, however, and may provide the data necessary for broader interpretation.

Pedogenic Inferences

The soils comprising 22IT590 are reflective of differing depositional events and environments. The sandy sediments that predominate in the depositional sequence are relatively coarser than sediment suites recorded at sites downstream in the Tombigbee River floodplain. This is the result of the higher energy environment produced by the comparatively steeper gradient of Mackeys Creek. Like other sites in the Phase I program, the combination of cultural activity, and attendant refuse deposition, and topographic position have produced a unique habitat in the floodplain environment. This habitat is well-drained, generally above seasonal high water, and thus, well-suited to diverse populaions of plants and animals.

GEOMORPHOLOGY

A schematic cross section of the terrace containing the Ilex site deposits is presented in Figure 8.15. Major stratigraphic units and relationships in this sequence are indicative of the colluvial-alluvial depositional history of this terrace. Overbank deposition (Mackeys Creek) and erosion off the adjoining uplands clearly are principal components in the genesis of this landform. The terrace is one of a series of Pleistocene outliers located in the UTV. The Poplar and Walnut sites are examples of similar environments in the Tombigbee River floodplain. Although the depositional histories and formaional characteristics vary between locales such differences are on the order of facies changes attributable to local environmental conditions. The depositional characteristics of 22IT590, 22IT539, and 22IT576 are suggestive of natural topographic development as point bars.

Cultural modification of these locales has altered natural pedogenic development, primarily in the midden portion of each deposit, and attests to both the intensity and duration of human occupation.

The repeated prehistoric settlement of Pleistocene outliers and other natural floodplain elevations in the UTV is indicative of the inherent stability, and to some extent, age, of these landforms. Prior study of early human settlement and Late Pleistocene/early Holocene environments in the Tombigbee River valley has documented the presence of numerous landforms of Quaternary age (Muto and Gunn 1980). Research at these locales has the potential to provide additional documentation of prehistoric patterns of human adaptation. In view of the magnitude of projected waterway construction-related impacts, further interdisciplinary study on data collected pertinent to Quaternary environments should be a priority objective of continuing investigations in the UTV.

Radiocarbon Dates

Radiocarbon assays obtained from 22IT590 are provided in Table 4. The dates are organized in stratigraphic sequence and are referenced by the appropriate lab number (e.g., DIC-2039). The age-determinations from Ilex, with one exception (DIC-2046), were obtained on samples of carbonized nutshells and minor amounts of wood charcoal. These dates thus represent stratigraphic rather then event ages, as samples were derived from general level fill.

Of the ten samples submitted for dating, six were extracted from levels associated with Early Archaic occupations at 22IT590. Unfortunately, all of these Early Archaic assays are considered to be too recent in age. A review of dated Early Archaic components in eastern North America suggests a temporal placement of about 9000 years B.P. for the earliest documented occupations at 22IT590 (Chapman 1977; Broyles 1971; Griffin 1974). The Ilex assays cluster at ca. 6000 years B.P. and are more in line with age estimates for late Middle Archaic manifestations in this region (Griffin 1974; Chapman 1977; Coe 1964). The radiocarbon samples from the Ilex site presumably originated in the Middle Archaic horizon and subsequently migrated down through the profile. The post-depositional formation of lamellae serves as an example of this process at 22IT590. Until additional samples can be obtained, considerations of the chronology of Early Archaic occupations at the Ilex site must be based on artifact comparisons and stratigraphic context.

Two of the four remaining radiocarbon dates (DIC-2039-2040) are associated with the Late Archaic Benton component. The dates of

3777 B.C. and 3808 B.C. obtained on this component are consistent with other Benton dates from the Phase I investigatons (see Poplar and Walnut site reports in this report). Samples DIC-2039 and 2040 therefore are interpreted as within an acceptable age-range for Benton occupations in this region.

Of the two remaining dates, one (DIC-2042) was associated with what appears to be a Middle Archaic component, while the other (DIC-2046) is a stratigraphic sample not associated with the cultural occupations. Sample DIC-2042 appears to be somewhat too recent for a Middle Archaic component (cf. Chapman 1977:165; Griffin 1974:13; DeJarnette et al. 1975:113; Coe 1964:123). The date on this sample may reflect the leaching of organics out of the overlying Benton horizon in the manner described above for the Early Archaic samples.

The modern date returned on Sample DIC-2046 was not unanticipated despite the considerable depth (ca. 3 m) of this buried tree stump. This sample was extracted from Test Pit 18 on the extreme northwestern edge of the site. The tree trunk sample appears to have been associated with paludal sediments unrelated to the terrace stratigraphic sequence.

Although attempts to date stratigraphic units and associated cultural materials at 22IT590 were not highly productive, the dates obtained underscore the complexity of multicomponent midden deposits in the UTV. The difficulties associated with radiometric dating of cultural middens can be attributed, in part, to:

1. The general lack of large, intact carbon samples, which requires extraction of dispersed stratigraphic samples for use in dating. Samples comprised of small carbonized remains, such as nutshells, are more susceptible to mixing of temporally unrelated occupational debris;

2. The intensity of cultural activities represented. Cultural alteration of living surfaces (e.g. excavation of pits and other features) further exacerbates the mixing of cultural debris;

3. The extensive bioturbation of organic-rich midden deposits; and,

4. The continuous effect of natural geologic processes (e.g., leaching, seasonal flooding) on the cultural deposits.

The dynamic relationship between cultural and natural processes (Galm 1981) conditions both the selection and interpetaton of radiocarbon dates, as well as the distributions of other cultural

materials. Although these considerations apply to virtually all archaeological sites, they are particularly relevant to locales such as 22IT590. The complexity inherent in multicomponent, midden sites requires special attention to the problems of dating respective occupations. Clearly, further refinement of the cultural sequence at 22IT590 and in the UTV will require submission of additional samples for dating. As suggested in other studies (Story and Valastro 1977), large-scale dating programs offer the greatest potential for the resolution of the problems discussed above, and should constitute a major goal of future research in the UTV.

CULTURAL REMAINS

INTRODUCTION

Preliminary descriptions of cultural feature classes and recovered artifacts are presented in this section. Summaries of feature and artifact data are presented in tabular form where pertinent; complete data sets for 22IT590 are provided in Appendices I and II and Supplements II, III, and IV to this report.

The feature and artifact data presented below provide the basis for identification of cultural components discussed later in this chapter. Although the descriptions and interpretations presented herein are preliminary, they provide an assessment and outline of the cultural sequence at 22IT590.

FEATURE CLASSES

Cultural features recorded at the Ilex site have been classified primarily on the basis of morphology, internal content, and size (Table 8.5). Included in the classification of 22IT590 features are clusters (n=7 or 10%), bone clusters (n=1 or 1%), complex clusters (n=1 or 1%), fired aggregates (n=2 or 3%), pits (n=51 or 76%), and prepared areas (n=5 or 7%). Definitions of these feature classes are presented in Chapter 4. The cultural debris content of each feature is provided in Appendix II.

Interpretations of the cultural activities associated with the Ilex site features are problematical. Differences between stratigraphically separate features of the same class generally cannot be ascertained. Feature recognition and definition were difficult throughout the excavations, particularly within the dark-colored cultural midden deposit. Such factors posed serious interpretive problems that effectively limited further study of

these phenomena. When considered as a whole, occupational features at 22IT590 have added little to the current understanding of the nature and kinds of cultural activities represented through time. Accordingly, the feature interpretations outlined in this analysis are, for the most part, inferential and subject to revision during future analyses.

Pits of all shapes and sizes were the most numerous features recorded at the Ilex site (Figures 8.16 and 8.17). The vast majority of pits contained the same kinds of cultural materials found in surrounding matrices. Pits generally were characterized by the dark color of the internal fill which contrasted with the lighter color of adjoining sediments. Evidence of burning, in the form of oxidized sediments and carbonized organics, commonly was identified in pit fills.

In all probability, two of the most common uses of pits were for the storage and processing of foodstuffs. The carbonized nutshells often recovered from these features may reflect use as a fuel. The artifacts present in many pits may be coincidental associations that were formerly elements of the general midden deposit used to fill these features during subsequent occupations. Special preparation techniques (e.g., rock or clay lining) apparently were not employed in the construction or use of pits during any period of occupation.

Fired aggregates were relatively small concentrations of burned earth (Figure 8.18). Both examples at Ilex appeared to be segments of larger, "prepared" features. These aggregates had slightly higher silt/clay contents than surrounding matrices, probably representing the inclusion of off-site sediments during preparation. There currently is no evidence or reason to suggest that the fired aggregates were formed incidentally during or between occupations. These features may be part of prepared living floors or platforms, the remainders of which have decomposed or were destroyed during subsequent occupation(s). However, it is also plausible that these fired aggregates are the remnants of large fire hearths. There was no indication that either feature was redeposited. The artifacts associated with one of the fired aggregates (F-24) are not indicative of specific activities and most likely are coincidental inclusions in the feature fill.

The seven rock features identified at 22IT590 include unmodified rocks appearing as generally moderate to small, well-defined clusters (Figure 8.19). Fist-sized, ferruginous sandstone cobbles predominate. At least several of the cobbles in each feature appear to be thermally-altered. Interpretations of these rock clusters are variable, but include components in short-term fire hearths or rock ovens, use as convenience tools in food preparation/processing or other activities, and, in several instances, association resulting from patterns of refuse

deposition. The latter interpretation implies no feature association, but rather a secondary accumulation of rock debris used in various, undetermined activities.

Cultural materials associated with the seven rock clusters commonly include burned debris, such as fire-cracked chert, hematite, and fired clay. This evidence implied in situ burning in association with the rock clusters and supports an interpretation of these features as primary deposits connected with fire-related activities. The majority of rock clusters probably represent components of hearths or rock ovens. The absence of strong oxidation of soil matrices and ash in association with the clusters may be attributed to rapid weathering and decomposition, post-depositional disturbances, and/or short-term use of these features.

Of the five prepared areas recorded, only two relate to prehistoric activities at the Ilex site. Both examples were burned (intentionally?) and were in excess of 1 m^2. These features resemble the fired aggregates discussed above, with the exception of their larger size (Figure 8.20). A greater diversity of artifacts was recovered from the vicinity of these features than at the fired aggregates. The combined evidence thus suggests that both features were segments of larger, prepared living floors or platforms. The vertical and horizontal proximity of Features 22 and 23, in fact, supports the proposition that these were remnants of a single prepared area.

The two remaining feature classes, bone clusters (Figure 8.21) and complex clusters, include one example each. The single bone cluster (Feature 64) probably represents a secondary human burial. Further consideration of Feature 64 is provided in a following section of this report (see Biotic Remains - Osteological).

The lone complex cluster defined at 22IT590 (Feature 39) contains a variety of cultural debris, including burned sandstone cobbles, lithic implements and debitage, and pottery. Evidence of burning and darker internal matrix color were interpreted as indications of a small pit, although no boundaries could be distinguished. The Wheeler sherds associated with this feature appear to be from a single vessel. In view of the evidence, Feature 39 is interpreted as a hearth contained in a small pit. The ceramics recovered in association probably reflect cooking activity, while the lithic materials relate to activities conducted around the hearth (e.g., food processing/preparation).

Of the 67 features recorded at the site, 14 (21%) can be assigned to a prehistoric cultural component or period, while three (Features 19-21) are associated with recent relic digging. Chronological assessments were based on the presence of

"diagnostic" Projectile Point/Knives (PP/Ks) or ceramics and/or the integrity of strigraphic context. Recognition of the modern intrusions derived from stratigraphic interpetations and the presence of historic/recent artifacts. The cultural materials associated with these 14 features are listed in Table 8.6

The chronological distribution of the 14 assigned features is as follows: seven Initial Late Archaic (Benton), two Gulf Formational, two Middle Archaic, two Early Archaic, and one Middle Woodland (Miller I?). The predominance of features allotted to Benton occupation(s) of the site is an indication of the intensity of Late Archaic settlement at 22IT590. However, the larger number of features associated with Benton occupations also can be attributed to factors of recognition.

The dark cultural midden attributed to Benton settlement of the Ilex site contrasted with the lighter-color matrix of the underlying Middle Archaic horizon, thereby facilitating feature recognition. The inability to recognize and assign a cultural origin to additional features is a common problem in the excavation and analysis of multicomponent, midden sites such as 22IT590 (Galm 1981). The relatively low number of features assigned a cultural origin is not an adequate indicaton of the nature or intensity of most occupations represented at the Ilex site. Further study of the material content and stratigraphic context of the remaining 50 features may provide additional clues pertaining to cultural origin, as well as activity relationships.

The horizontal and vertical distribution of features across the site largely reflects the excavation strategy and the problems of feature recognition described above. The mechanical or hand stripping of the upper levels (usually Levels 1 through 4) in various areas precluded investigation of cultural features associated with late occupations. Correspondingly, most features were recorded in Levels 5-11. The horizontal distribution, however, does reveal a concentration of features in Block E (18). Excluding the three modern intrusions, fully 28% of all recorded features occurred in this one 4 m^2 excavation unit (Figure 8.7). Most of the remaining features were recorded in the Master Block, but did not reveal a concentration similar to that observed in Block E. The Block D (Figure 8.9) excavation unit was mechanically stripped for the singular purpose of defining cultural features over a large area. The investigation of this 10 m^2 unit produced very limited results as only four features, two of unknown cultural origin, were recorded. However, an important benefit of the Block D investigation was to document the emphasis on settlement of the north end of the terrace during the entire cultural sequence.

The concentration of pits in Block E (Table 8.5) probably represents multiple activities conducted over a span of several

occupations. Included cultural materials generally occur in limited numbers and are not indicative of specific activities or activity sets. The relatively low level of definition of most Block E features (ca. Level 12) does not necessarily imply an early cultural origin. In all likelihood, the bulk of the Block E pits correspond to Middle Archaic, or possibly, early Late Archaic, occupations at 22IT590. This clustering of features in the northern portion of the site provides further evidence of the intensity and duraton of prehistoric settlement in this area. In addition, this distribution of features supports the contention that a significant portion of the Ilex site was destroyed prior to Phase I. The destruction of the north end of the site occurred during recent construction activity which removed the entire toe of the terrace (Figure 8.7).

ARTIFACT CLASSES

The classification of artifacts was conducted in two stages. All artifacts initially were sorted into descriptive categories as described in the laboratory manual (Appendix 3). A second examination of artifact categories was conducted following completion of the excavations at the Ilex site. The latter analysis focused on the attributes of form, technology, and use within chipped stone implement categories. Time limitations did not permit an exhaustive review of all artifact categories. Instead, emphasis was placed on the description of artifact categories that could not be easily interpreted from an examination of the laboratory manual. The weighing of certain artifact categories has resulted in some degree of unevenness in the following descriptions. However, in most instances, those categories that are only briefly described do not appear to be temporally sensitive. The present classification of categories such as ceramics and ground stone, therefore, is preliminary pending more intensive analysis.

Ceramics

The ceramics recovered from 22IT590 include a wide variety of "diagnostic" types (Figures 8.22-8.30). The chronological distribution of these types spans over 2000 years of prehistory in the Southeastern U.S. Based on typological evidence alone, therefore, ceramic-bearing occupations at the Ilex site appear to have considerable time depth and represent many different cultural phases. However, attempts to provide a chronological ordering of ceramic-bearing occupations, through a seriation of the types represented, were unsuccessful. As described below, the 22IT590 ceramic sample is mixed stratigraphically and thus is not amenable to extensive analysis. Further, more rigorous

analysis of the types represented may provide additional infor- maion on chronological distribution of the ceramics from 22IT590. Ceramics were derived from most block excavation units (n=2637) and all test pits (N=2251). The total ceramic sample thus includes collections from all areas of the site. The largest assemblages were recovered from the Master Block (n=1376) excavation area, Block B (n=476), and Block C (n=699). These units combined constitute 52% of the total ceramic sample from 22IT590. Within the Master Block, one unit, Block A-Z, contained 97% of all recovered ceramics and the entire sample in Levels 1 through 4. The distribution of ceramic types in Blocks A-Z, B, and C is presented in Tables 8.7, 8.8, and 8.9, respectively. These three samples parallel ceramic distributions from the remaining excavation units and provide a clear indication of the problems that exist in defining the sequence of ceramic-bearing occupations at 22IT590. Level summary tables for all other blocks are presented in Appendix I of this report.

Ceramics are concentrated in Levels 1-4 in all areas of the site. Levels 1-4 comprise 98% of the Block A-Z ceramic sample, 96% of the Block B sample , and 98% of the Block C ceramic assemblage. The relatively low numbers of sherds recovered below Level 4 most likely reflect mixing of the cultural deposit. Allowing for undulations in the cultural deposit, ceramics appear to have been introduced at the Ilex site between approximately Levels 4 and 5. Sherds increase rapidly in number above Level 4, with the largest samples consistently recorded in Level 1.

The distribution of ceramic types within Levels 1-4 is not apparent from the available data. As indicated in Tables 8.7-8.9, considerable overlap exists in level samples of major temper groupings and ceramic series. Fiber, sand, limestone, grog, and shell temper classes are represented, although sand tempered sherds predominate in all recovered samples from the site. Included within these temper classes are wares assigned to the Wheeler and Alexander Series (Gulf Formational), Miller Series (Woodland), and a relatively small Mississippian ceramic inventory. The early Gulf Formational Wheeler Series (Figures 8.27-8.30) presumably was represented in the initial ceramic-bearing components (ca. 900-500 B.C.) at 22IT590. However, ceramic samples from all areas of the site are dominated by Alexander Series ceramics (late Gulf Formational) (Figures 8.23-8.24). This is consistent with findings from other Phase I sites which indicate an extensive Alexander settlement of the UTV (ca. 500-900 B.C.).

Miller (I-III?) components are indicated by a variety of diagnostic sand (Figure 8.25), limestone (Figure 8.23), and grog (Figure 8.22) tempered sherds. The limestone tempered sherds in the 22IT590 sample may indicate trade with the Middle Tennessee Valley during the span of Miller occupations. Plain, sand tem-

pered sherds recovered from the Ilex site probably represent both Miller (Baldwin Plain) and Alexander (O'Neal Plain) occupations. Assignment of plain, sand tempered sherds to either the Baldwin or O'Neal ceramic categories was not attempted as these plain wares are extremely difficult to sort with any consistency.

Shell tempered ceramics are present in the upper levels and suggest Mississippian occupation(s) of 22IT590. In all probability, the Mississippian component(s) represents the last major occupation of the Ilex site.

Chipped Stone

A summary of chipped (and ground) stone implements is presented in Table 8.10. Chipped stone artifacts dominate cultural materials recovered from the Ilex site. Included in these categories are both "finished" and "unfinished" artifacts representing a diversity of manufactural stages and use-phases (Ahler 1975). Use interpretations are presented in the text of the descriptions whenever possible.

The projectile point/knives (complete and fragmentary) recovered from 22IT590 comprise 21% of the chipped stone sample. Included in this category are a variety of referenced types. Projectile point/knives have long been recognized as temporally sensitive artifact forms (Coe 1964:9; Chapman 1977:25) and the types represented in this sample were useful in clarifying the temporal placement of associated artifacts. However, considerable overlap exists in the attributes of certain types, while others continue in use for too long a time to be of use as temporal markers. To facilitate future reference to and analysis of the projectile point/knife types included in the Ilex sample, descriptions of all categories represented have been made as thoroughly as possible at this stage of analysis. The raw material types and measurement summary statistics of all projectile point/knife categories are presented in Tables 8.11 and 8.12. As in Chapters 6 and 7 of this report, some type categories have been split into varieties reflecting subtle differences in stylistic and/or technological attributes. Further refinement of the groups described in this analysis therefore may be required before realistic type categories can be identified.

Projectile Point/Knives

Beachum $\underline{n}$ = 9 (Figure 8.31b, c)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: This is a provisional category that includes Projectile Point/Knives (PPKs) similar to examples described as the Beachum type (Brookes 1979:41). These are corner-removed, expanding stemmed specimens that have incurvate, beveled bases. Shoulder treatment ranges from squared with short barbs to slightly tapered. Tangs are either rounded (6) or pointed (3). Hafting elements range from slightly abraded to crushed. Blade margins are generally irregular, in most instances reflecting extensive reworking. Cross sections are plano-convex (6) or biconvex (3). Five of the specimens in this category were recovered in Levels 4-6; the remaining PP/Ks are from Level 3 and above.

Beaver Lake $\underline{n}$ = 1 (Figure 8.32k)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: This provisional category includes a single fragmentary specimen. The hafting element is formed by broad, shallow side-notches, or lateral constrictions, and is heavily ground. The base is incurvate and heavily ground. Tangs are pronounced, rounded, and heavily ground. Blade edges were apparently excurvate. The cross section is biconvex. This specimen resembles the Greenbrier type and may be one example in an Early Archaic PP/K complex which includes Quad, Beaver Lake, Dalton, Greenbrier, Hardaway, and possibly some Kirk-like corner-notched forms. This specimen was recovered from Level 10.2.

Benton $\underline{n}$ = 58 (Figure 8.33)

Material: Table 8.11

Metric Data: Tables 8.12 and 8.13

Discussion: A single variety of Benton Projectile Point/Knife was initially recognized in the sample from 22IT590, Benton Short Stemmed (58); Table 8.12 presents the measurement summary data.

However, the Benton category described contains a wide variety of morphologies that cannot be fully evaluated in the present analysis. It would appear that while selected attributes do cluster within the varieties of this type (cf. Cambron and Hulse 1975:12-13; Lewis and Lewis 1975:34; DeJarnette et al. 1962:47), a considerable degree of overlap also exists. For this reason, "Benton" has been treated as a PP/K complex, defined in part by technological attributes, and will require further refinement that can only be provided through intensive analysis. In the discussions that follow, every effort has been made to describe the variation noted in this sample in order to facilitate further analytical manipulation and future reference to this category.

The Benton category has been subdivided into five variants based primarily on hafting element morphology; the metric data is presented in Table 8.13. The first of these (Variant A) (Figure 8.33a, b, c) is characterized by specimens (n=9) with broad, very short stems. Hafting elements are formed by corner-removals which appear as a constriction of the blade outline near the proximal margins. Crushing or slight abrasion occurs on the hafting elements of five specimens. Blade margins generally are straight (5) or excurvate (4) and these specimens have a long, lanceolate outline. Most examples exhibit well-controlled retouching of blade margins. Cross sections are flattened. These specimens all appear to have been manufactured from large spalls, or possibly, blade-like flakes. All specimens have proximal flake-blank orientations (Binford 1963:210), which is the case for most of the specimens in the entire Benton category. Six of the nine Variant A specimens occur in Levels 6-8.

Variant B specimens (n=7) (Figure 8.33d, e) vary from Variant A examples only in the length of the stem. Hafting elements are longer, although stem widths appear to change very little on Variant B projectile point/knives. Blade margins range from straight to excurvate to incurvate, the latter resulting from extensive resharpening.

Projectile points/knives in Variant C (n=14) (Figure 8.33f, g) have straight to slightly contracting stems and incurvate bases. Shoulders range from nearly horizontal (squared) to tapering. Strongly incurvate bases on most specimens produce well-defined, pointed tangs. Bases are beveled and stem margins are either crushed or abraded. Cross sections are flattened or biconvex and all examples have a proximal flake-blank orientation.

Specimens in Variant D (n=11) (Figure 8.33h, i) have expanding stems, with straight to slightly excurvate bases. Hafting elements are formed by corner-removal or corner-notching. Bases are abraded (6) or ground (4) and lateral stem margins are abraded. Blade margins are straight (3), asymmetrical (1), and excurvate

(2). Cross sections are biconvex (6), plano-convex (2), and flattened (3).

Variant E specimens (n=14) (Figure 8.33j, k) are characterized by an expanded, incurvate haft element. The stem is produced by lateral corner removal or corner-notching. Haft element margins generally are abraded, however, the bases of six specimens are ground. Shoulders are tapered, horizontal or weakly barbed. Blade margins are incurvate (1), straight (1), excurvate (5), or asymmetrical (2). Cross sections are biconvex (6), plano-convex (4), and flattened (4).

Three specimens are included in Variant F (Figure 8.33l, m) amd have been distinguished on the basis of overall size. These specimens have straight short stems, slightly incurvate bases and the maximum width dimension (§40 mm) occurs at the shoulder. Shoulders are straight and, apart from overall size, these PP/Ks conform in most other aspects to the description provided for Variant C.

The distributions of specimens can be summarized by variety as follows: 1) Variant A: Levels 5-8 contain 5 of the 7 specimens; 2) Variant B: Levels 6 and 8 contain 3 specimens; 3) Variant C: 7 of 14 specimens were derived from Levels 5-8; 4) Variant D: Levels 6-8 contain 2 specimens and an additional 2 were derived from features; 5) Variant E: Levels 5-8 contain 6 specimens with 2 additional PP/Ks from features; 6) Variant F: these specimens come from Levels 7 and 10. The majority of specimens not recorded in the above distributions were recovered from the surface (35% of the total Benton PP/K sample).

<u>Big Sandy</u> <u>n</u> = 6 (Figure 8.31f, g)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: The six specimens in this category are characterized by narrow, shallow side-notches with incurvate bases and squared to rounded tangs. Bases are heavily ground (4) or abraded (2) and thinned. Flake removals appear to be random. Blade margins are excurvate (3) or asymmetrical (2). One specimen is serrated on one blade edge. All specimens have been resharpened but only one exhibits an irregularly retouched, alternately beveled blade. With only one exception, this reworking establishes the stem as the widest dimension. Cross sections are biconvex (4), plano-convex (1), or rhomboidal (1).

Excluding a surface find, the Big Sandy PP/Ks were recovered from Levels 7 (2), 8 (1), 9 (2), and 11 (1). The three specimens from Levels 7 and 8 are in questionable stratigraphic context. The Level 9 and 11 Big Sandy PP/Ks are considered to be in appropriate stratigraphic position.

Cotaco Creek n = 10 (Figure 8.34c, d)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: Projectile point/knives included in the Cotaco Creek category have relatively broad blades and narrow, straight stems. Bases are straight (5) or excurvate (5), thinned, and stem margins exhibit only minor crushing. Shoulder treatment ranges from straight (3) to tapered (4) to asymmetrical (2). Blade margins are asymmetrical except for two excurvate examples. Blade edges are finely retouched on three examples. Cross sections are thin biconvex (6) and plano-convex (4). Platform remnants are present on the bases of four specimens, which most likely had proximal flake-blank orientations. Six specimens (nonsurface) were recovered from Levels 1-4. The description provided here varies somewhat from those provided in Cambron and Hulse (1875:33) and DeJarnette et al. (1962:53).

Cypress Creek n = 11 (Figure 8.31d, e)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: Specimens in this category are generally characterized by broad, deep corner-notches, slightly expanding, wide, short stems, and broad blades. Most of the specimens are more accurately described as corner-removed rather than corner-notched. Many of the specimens have well-defined shoulders and blades. Bases are straight to very slightly excurvate. Bases and hafting elements are slightly abraded or crushed, but not ground. Blade edges are generally straight (n=6), asymmetrical (n=3), or slightly incurvate (n=2); a single broken specimen has one excurvate margin that was modified after fracture. All examples are extensively resharpened/reworked. Cross sections are biconvex (7) and plano-convex (1). Distributions are: Levels 9.2 (2), 9.1 (1), and 7.2 (1), Levels 6 (1) and 3 (1), and surface (5).

Dalton n = 5 (Figure 8.31h, j)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: The five specimens included here exhibit considerable morphological variation. This range probably encompasses several named Dalton varieties, such as Colbert (Cambron and Hulse 1975:37; DeJarnette *et al.* 1962:51), Greenbrier (Cambron and Hulse 1975:38-39; DeJarnette *et al.* 1962:57), and Nuckolls (DeJarnette *et al.* 1962:65). The present examples may also overlap with the Beaver Lake (DeJarnette *et al.* 1962:47); Cambron and Hulse 1975:10) point type, among others. Pertinent comparative data can be found in a report on the Hester site excavations (Brookes 1979).

The points in this category range from lanceolate in outline to one small, extensively reworked specimen. Bases are incurvate and heavily ground. Blade edges are excurvate (2) or straight (1). A single specimen exhibits minor serration along one weakly beveled blade margin. Stem margins end in well-defined tangs, which are rounded and ground. Cortex patches are present on the tangs of three specimens. All Dalton specimens were recovered from Levels 8 through 10. Level 10 yielded three of the five Dalton PP/Ks.

Eva n - 11 (Figure 8.35a-d)

Material: Table 8.11

Metric Data: Tables 8.12 and 8.14

Discussion: The 11 specimens included in the general Eva category are divided into two variants. Three have been classed as Variant A and eight have been assigned to Variant B. Both groups are characterized by basal notching which separates included specimens from similar Middle Archaic forms like Morrow Mountain (Coe 1964:37, 43; see also Brookes 1979:42).

Variant A (Figure 8.35a, b) specimens are medium-sized, exhibit barbed shoulders and straight (2) or asymmetrical stems (1). The bases are thinned and straight (2) or excurvate (1). Broad, deep basal notches produce well-defined stems and shoulders. Blade margins are excurvate (1) or straight (2). Two of the three Variant A specimens appear to have been resharpened. Cross sections are weakly biconvex. Variant A projectile point/knives were recovered from Levels 8 and 11; one specimen was found in Feature 6.

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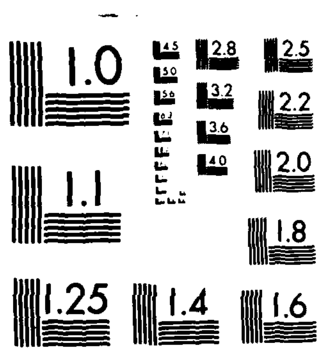

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Variant B (Figure 8.35c, d) specimens are small to medium in size. They are characterized by a short, medium to wide hafting element formed by thinning the lateral sections of the basal edge. The stems are contracting and the bases are pointed (1), excurvate (3), rounded (3), or straight (1). Shoulders are inversely tapered (4) or asymmetrical (4). Blade margins are straight (1), asymmetrical (3), or excurvate (2). One specimen exhibits serration. Cross sections include biconvex (7) and plano-convex (1) forms. Variant B projectile point/knives were recovered from Levels 7 through 10, with the exception of one surface find.

<u>Gary</u> <u>n</u> = 9 (Figure 8.34e, f)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: Specimens included in this category are moderate-sized with contracting stems and straight (1) to excurvate (8) bases. Hafting elements on most examples exhibit only slight crushing or abrasion. Stem margins are straight to asymmetrical. Shoulder treatment ranges from asymmetrically tapered (7) to squared (2). Blade outlines appear to be divided between straight (triangular) and asymmetrical, although most specimens are fragmentary. The majority of examples in the Gary category has been reworked and/or resharpened. Cross sections are biconvex (5) and plano-convex (4). Four of six specimens, excluding surface finds (3), were recovered from Levels 1-4. The contracting stemmed PP/Ks described in this category resemble other named types, such as Adena (cf. Bell 1958:4-5; Cambron and Hulse 1975:2-3), or may be reworked from other described types.

<u>Greenbrier</u> <u>n</u> = 21 (Figure 8.31k-n)

Material: Table 8.11

Metric Data: Tables 8.12 and 8.15

Discussion: Points included in the Greenbrier complex on site 22IT590 cluster in two general size categories, small (n=10) and medium (n=6). A third group of five fragmentary specimens form a miscellaneous variety that is provisionally retained in this category. Stem elements in both groups are characterized as follows: broad, shallow side-notches, sometimes U-shaped; pronounced tangs that are slightly pointed or rounded; stems (hafting area and base) that range from abraded to heavily

ground, are incurvate to straight and well thinned; blade edges are generally excurvate, occasionally (1) reworked into a straight configuration; and cross sections that are pedominantly biconvex. Flake removal series are generally random within both size groups. Distributions are: (small) Levels 9-11 (seven), Levels 7-8 (two), and Level 5 (one); (medium) Levels 10-11 (two), Levels 6-7 (two), and surface (one); (miscellaneous) Levels 9-13 (three), Level 7 (one), and surface (one). Further analysis will be required to establish the validity of the present category assignment for these points, although, as suggested by their vertical distribution, they do appear to be part of the Early Archaic component at 22IT590.

Hardaway $\underline{n}$ = 1 (Figure 8.32a)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: This fragmentary specimen is broadly side-notched with a strongly incurvate base and moderately defined shoulders. Broad projecting tangs are ground and constitute the widest segment of this specimen. This specimen was reworked prior to breakage and exhibits modification at the mid-section break.

The single Hardaway specimen was recovered from Stratigraphic Trench 2 at an elevation of 96.19 m. This elevation approximates Level 8 in eastern portions of the site, which is analogous to strata containing Early Archaic materials in more westerly sections of the site.

Late Woodland/Mississippian Triangular $\underline{n}$ = 22 (Figure 8.30c-f)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: These projectile point/knives are small and generally triangular in outline. Bases range from straight (5) to incurvate (17). Blade edges are asymmetrical (7), excurvate (4), straight (4), or incurvate (3). Most specimens have biconvex cross sections (19), although plano-convex examples do occur (3). Tips on these specimens are acute on complete examples. The base-lateral margin juncture ranges from pointed to slightly rounded. Of the 22 specimens in this category, 16 were recovered in Levels 1-3. Projectile point/knives in this category resemble a number of named types found in the eastern and southeastern

U.S., such as Madison (Perino 1968:52-53; Cambron and Hulse 1975:84), Fresno (Bell 1960:44-45), and Hamilton (Cambron and Hulse 1975:64; Lewis and Kneberg 1976:110-111).

Ledbetter/Pickwick n = 16 (Figure 8.34g-h)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: Included in this category are moderate-sized to large projectile point/knives, characterized by straight to slightly contracting stems, tapered (14) to squared (2) shoulders, and straight (4) to excurvate (12) bases. Bases are thinned (14) and usually exhibit only minor crushing, which extends along lateral stem margins and internal notch areas; bases are ground on two examples. Cortex remnants are present on the bases of three specimens; all specimens in this category appear to have been manufactured from proximally oriented flake-blanks. Blade outlines are generally asymmetrical and most examples are heavily reworked. Cross sections are biconvex (13) and plano-convex (2). Six of the eight nonsurface PP/Ks included in this category occurred in Levels 1-4. Specimens in this collapsed category generally conform to the descriptions provided by Cambron and Hulse (1975).

Kirk Corner-Notched n = 31 (Figure 8.32b-j)

Material: Table 8.11

Metric Data: Tables 8.12 and 8.16

Discussion: Two, possibly three, stem forms are represented in the Kirk Corner-Notched point complex. Stratigraphically, a small, straight to slightly incurvate base variety (Variety A1, n=12, Figure 8.32b-f) predominates in the lowest levels (10-12) at 22IT590. Stems on specimens in this first group are short and generally abraded or ground (9) and thinned. Blades are heavily beveled ("right hand") on most (9). Blade edges are straight to slightly incurvate (reworked) and serrated on eight specimens. Variant A1 specimens exhibit cross sections that are plano-convex (3), flattened (1), biconvex (2), and rhomboidal (6). Distributions are: Levels 10-12 (9), Level 7 (1), and surface (2).

The second provisional group (Variety A2, n=8, Figure 8.32g-h) includes specimens that have straight to slightly incurvate

bases, broad corner-notches and overall medium size. Five specimens have moderately to heavily ground bases. Blade edges are straight to slightly incurvate and none are alternately beveled. Three specimens are serrated. Cross sections of these PP/Ks are plano-convex (4), flattened (2), or biconvex (2). Distributions are: Levels 8-9, 11 (3); Level 5 (1); and surface (4).

The next group identified in this sample (Variety B, n=8, Figure 8.32i-j) is characterized by broad, strongly excurvate bases that are heavily ground. These specimens are of moderate to large overall size. Corner-notches are generally narrow and deep. Blade edges (n=6) are asymmetrical, ranging from straight to incurvate. Five specimens retain blade elements that have been alternately beveled. Four Variant B projectile point/knives are serrated. Variant B cross sections include plano-convex (2), biconvex (4), and rhomboidal (2) forms. Distributions are: Levels 9-10 (6); Level 4 (1); and surface (1).

The remaining three specimens (Variant C), which are classified either as Kirk Corner-Notched (1) or Stemmed (2), cannot be accommodated within the above defined varieties. These may represent undefined varieties and are provisionally retained in this category pending further detailed examination. Distributions for these specimens are: Levels 9-10 (2) and Level 5 (1).

<u>Little Bear Creek/Flint Creek</u> <u>n</u> = 86 (Figure 8.36)

Material: Table 8.11

Metric Data: Tables 8.12 and 8.17

Discussion: The combination of these two types into a single category, although a seeming departure from previous analyses (cf. Camborn and Hulse 1975; DeJarnette <u>et al.</u> 1962), was predicated on the inconsistencies inherent in the sorting criteria established for each projectile point/knife type. Further analysis and reclassification will be required to refine and formalize the categorization provided herein. It must be clearly noted, however, that as part of any reanalysis a serious attempt should be made to establish the validity of these two categories, Flint Creek and Little Bear Creek, as independent types. With the accumulation of data on the Upper Tombigbee Valley, it is apparent that both forms overlap in time and span a period of preceramic (Late Archaic) and ceramic-bearing (Wheeler/Alexander) occupations. At present, there is some suggestion that Flint Creek and Little Bear Creek forms are part of a point complex, perhaps encompassing such forms as Bakers Creek, Cataco Creek, Smithsonia, Kays Stemmed, Cambron and Hulse 1975). Revised and consistently applied definitions will be required before reclas-

sification of these forms from sites in the Upper Tombigbee Valley can be conducted.

Seven variants of this category were sorted during analysis and are described below. Reference to defined types will be made whenever possible, although exhaustive comparisons have not been attempted.

Variant A (n=15) (Figure 8.36a) contains small to moderate-sized specimens with straight to slightly contracting, narrow stems. Bases are ususally straight (10), but weakly incurvate (3) and excurvate (2) examples do occur. Hafting elements commonly exhibit only minor crushing, with more extensive abrasion apparent on the stem margins of only three examples. Eight specimens retain evidence of proximal flake-blank orientations; it is highly probable that all specimens in this group were manufactured in this fashion. Shoulder treatment ranges from squared to tapered. Blade margins are excurvate on two examples, with all remaining specimens asymmetrical in outline. Three specimens are serrated. Four examples have been extensively reworked distally and may have been used as perforators/drills. Cross sections are biconvex (11), flattened (3), and plano-convex (1). Excluding surface finds (6), most specimens were recovered in Levels 1-3 (8). Specimens in this category resemble the Flint Creek type.

Projectile Point/Knives included in Variant B (n=20) (Figure 8.36b, c) are characterized by parallel-sided stems and excurvate to straight bases. Hafting element margins are crushed or slightly abraded. Shoulders are squared to tapered and two examples are barbed. Blade outlines are asymmetrical or occasionally excurvate (3). Four specimens are serrated. All but two included here clearly retain evidence of proximal flake-blank orientations. Cross sections are biconvex (17), plano-convex (2), or flattened (1). Apart from surface finds (12), most examples (5) were recovered from Level 1 at the site. Projectile point/knives in this group are similar to the Little Bear Creek type.

The seven specimens that comprise Variant C (Figure 8.36d, e) are small to moderate in size, and have relatively long, expanding stems and excurvate bases. Hafting elements were produced by broad, deep corner-notches. Stem margins exhibit only minor crushing or abrasion. Shoulders are generally squared. Blade margins range from excurvate to straight, although most are asymmetrical due to reworking. One specimen exhibits fine serrations along the blade. Four of the seven examples have proximal flake-blank orientations and all specimens were manufactured from flakes. Cross sections are biconvex (5) or flattened (2). Projectile Point/Knives included in this category were recovered in Levels 2-4 (4) and from the surface (3).

Projectile Point/Knives included in Variant D (n=14) (Figure 8.36f, g) have expanding stems, excurvate (asymmetrical) bases that retain cobble cortex and initial striking platform remnants, and are generally of moderate size. Hafting elements were formed by large alternate (face) flake removals at the corners (proximal); little or no attempt has been made to expand or retouch the notches on the majority of specimens. Lateral stem margins are rarely crushed or abraded. Shoulders are straight (5), tapered (4), or asymmetrical (5). Blade margins are excurvate (4), straight (2), or asymmetrical (8). Four specimens are serrated; in every instance where serration occurs there is a corresponding refinement of hafting elements which includes increased abrasion and/or crushing or lateral stem margins. All specimens have a proximal flake-blank orientation. Cross sections are biconvex (12) or plano-convex (2). Most specimens have pronounced mid-line ridges. Of the nine specimens that were recovered below surface, eight were recovered in Levels 1-4.

Variant E specimens (n=14) (Figure 8.36h, i) are characterized by expanding stems and thinned, excurvate bases. In general, these specimens resemble Variant D specimens. Cortex remnanats have been removed from the stems as a result of thinning and this produces a more "finished" appearance. However, like Variant D, these examples have proximal flake-blank orientations. Stem margins are generally agraded (11). Shoulders are generally asymmetrical (9), but straight (1) and tapered (4) examples do occur. Blade margins are asymmetrical (11) or excurvate (3); two are serrated. Cross sections are biconvex (10) or plano-convex (4). The distribution of these specimens ranges from Levels 1-3 (nonsurface).

Variant F specimens (n=6) (Figure 8.36j, k) are moderate-sized with parallel-sided stems that are offset diagonally from the juncture of the blade and stem. Stems are produced by corner-removal. Hafting elements have abraded or crushed margins. Bases are thinned and generally asymmetrical; cortex remnants are present on the bases of most examples (5). Shoulders range from straight (3) to tapered (3). Blade outlines are excurvate (1), straight (1), or asymmetrical (4). Cross sections are biconvex (4) or plano-convex (2). Variant F specimens were recovered in Levels 3-5.

The final variant (G) (Figure 8.36l-n) sorted during analysis is comprised of relatively long, expanding stemmed PP/Ks (n=10). Stem margins are straight (5) or incurvate (5) and have been crushed and/or abraded. Bases are straight (5) or excurvate (5) and thinned. Shoulders grade from straight to tapered. Blade margins are excurvate to straight and three specimens are serrated. Most of the specimens included in Variant G appear to have proximal flake-blank orientations. Cross sections are biconvex (9) and plano-convex (1). The three nonsurface examples

from this group were recovered between Levels 1-3. Several of the specimens included here resemble PP/Ks of the Mud Creek and Bakers Creek types.

<u>McIntire</u> <u>n</u> = 11 (Figure 8.34i-m)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: This is a provisional category. Specimens in the McIntire category are generally of moderate size, exhibit well-defined expanding (9) and straight (2) stems, straight (11), abraded (6) or ground (5) and thinned bases, with horizontal shoulder treatment that occasionally (4) terminates in short barbs. The expanding haft elements are produced by broad corner-notches. Blade margins are straight (6), asymmetrical (3), or excurvate (2). Cross sections are biconvex (9) or plano-convex (2). Most specimens (9) were recovered from Levels 7, 8, and 10.

<u>Morrow Mountain</u> <u>n</u> = 9 (Figure 8.34e-g)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: This is a provisional category that contains specimens similar to previously defined Morrow Mountain I and II stemmed varieties (Coe 1964:37, 43) and selected examples from the Eva site (Lewis and Lewis 1977:37). There is some overlap with projectile point/knives included in the Eva category (Variant B). Refinement of the classification schemes for these Middle Archaic point styles from the Upper Tombigbee Valley remains a problem that will require further analysis. At present, classification of PP/Ks from Middle Archaic horizons on a project wide basis is relatively consistent, although category allocation of specific examples will require further scrutiny. Several of the specimens in this category resemble Adena points.

The specimens included here range from large to small in size and have proximal margins shaped either through initial corner-notching with subsequent enlargement of notch areas or by a removal series oriented diagonally to the long axis of the objective piece. The latter technique produces short, roughtly pointed stems that often are poorly defined. Bases are generally abraded (7) and excurvate. Well-defined hafting elements are present on four specimens. Blade margins are most commonly

excurvate, although asymmetrical examples do occur (2). Cross sections are biconvex (5), flattened (2), or plano-convex. The Morrow Mountain specimens are distributed from the surface through Level 9. No stratigraphic clusters are represented.

Plevna n = 4 (Figure 8.32o)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: The four examples in this category have short, expanding stems and broad excurvate bases formed by narrow, relatively deep, U-shaped corner-notches. Bases are ground on three intact specimens. Blades are broad with excurvate edges that lack extensive tertiary flaking. These points retain the overall morphology of ovate preforms manufactured from large flakes. The examples in this group resemble the Variety B Kirk PP/Ks described earlier and are similar in morphology to Plevna points (Cambron and Hulse 1975:106). Cross sections are plano-convex (1) and biconvex (2). One specimen was recovered from Level 11.2; the remaining three specimens are surface finds.

Residual Stemmed n = 94 (Figure not illustrated)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: This is a miscellaneous category that includes projectile point/knives that do not conform readily to one of the defined categories. Many of the specimens included here no doubt can be assigned to existing or new type categories with further analysis. The wide variety of morphologies represented in the Residual Stemmed category includes several major clusters based on hafting element form: corner-notched/expanding-stemmed varieties, short-stemmed, corner-removed varieties, contracting-stemmed varieties, and straight stemmed varieties. Although the blades on many specimens are broken, complete specimens have blade outlines that range from excurvate to asymmetrical. All specimens in this category generally are of moderate to large overall size. In view of the tremendous range of morphologies represented in the Residual Stemmed category, further descriptive treatment at this stage of analysis would be unproductive.

Residual Triangular n = 9 (Figure 8.32 l-n)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: Specimens included here are generally triangular in outline and may represent "unfinished" or finished implements, preforms, or biface blades that either have not been used intensively or simply do not reveal the indicator morphologies indicative of use. This is a provisional category that most likely contains multipurpose implements and stages in a manufactured continuum. The physical characteristics of specimens in this category resemble Late Woodland-Mississippian Triangulars except for a much larger size. Examples of the Residual Triangular category range in vertical distribution from Level 4 through Level 12.

Sykes-White Springs n = 20 (Figure 8.35h-l)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: This category includes two variants, A and B. Variant A (n=13) (Figure 8.35h-j) contains specimens with straight (9) to slightly incurvate (4) bases, which are abraded (9) or ground (3). Shoulders are generally squared and three examples have short barbs. Corner-notches have been expanded on three specimens and produce a corner-removed appearance. Stems are straight (parallel-sided) on most examples. Blade margins are excurvate (6), asymmetrical (2), or straight (3). Flake removals are broad (collateral) and random. Cross sections are generally thin and include biconvex (8), flattened (2), and plano-convex (3) forms. Two specimens from Level 10 have graver/perforator spurs manufactured on their distal tips. Five Variant A specimens were recovered from Levels 9-11, five were recovered from Levels 4-7, and three were surface finds.

Variant B (n=7) (Figure 8.35k-l) includes specimens that exhibit straight (4) to gently excurvate, thinned bases (3). Expanding stems are formed either by small, shallow side-notches or corner-removal. Shoulders are tapered to nearly horizontal. Blade edges are slightly excurvate (3), straight (1), and asymmetrical (3). Most examples exhibit resharpening series along blade margins. Cross sections are plano-convex (1) or biconvex (5). Five of the seven specimens were recovered from Levels 6-8; the remaining specimens are from Level 3 and the surface.

Tombigbee Stemmed _n_ = 4 (Figure 8.34b)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: This is a provisional category that contains moderate-sized to small, contracting stemmed PP/Ks. Bases are asymmetrical (2) to straight (2) and stem margins exhibit either minor crushing (3) or abrasion (1). Shoulders are tapered. Blade margins are excurvate (2) or asymmetrical (2); one example is finely serrated. Cortex is present on the bases of two specimens. Cross sections are biconvex (4). The specimens included in this category were all recovered from the surface of the site. In outline, these projectile point/knives resemble several existing types, including Gary and Adena contracting stemmed forms. All four of these specimens are from the surface.

Unfinished Small Triangular _n_ = 3 (Figure 8.30g)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: The three specimens in this category are all roughly triangular with broad, random flake scars and asymmetrical edges. Cross sections are plano-convex (2) and biconvex (1). These specimens have an "unfinished" appearance as a result of the general asymmetry of their form. One example has a crushed distal margin which may relate to hafting and/or use; the remaining two specimens most likely were discards that were broken and/or rejected during manufacture. Two specimens were recovered in Level 1 and the remaining example was recovered in Level 3. Several of these may be preforms (i.e., "unfinished") or "finished" implements that were used in their present form.

Vaughn _n_ = 2 (Figure 8.31a)

Material: Table 8.11

Metric Data: Table 8.12

Discussion: The two examples in this category are relatively short and broad, with wide, straight stems and bases. The stem edges on one specimen have been crushed. Bases on both are thinned. The shoulders are generally asymmetrical, as are the blade margins. Both examples have been reworked along blade

margins. Cross sections are biconvex. One specimen was recovered in Level 8, while the other occurred in Level 1.

Bifaces $\underline{n}$ = 236 (Figure 8.37)

Material: Table 8.18

Metric Data: Table 8.19

Discussion: The wide variety of bifaces identified during analysis reflects, for the most part, the macromorphological diversity represented in this artifact category. Not represented in the present classification scheme, however, is the apparent variation in technological attributes and the use(s) or function(s) of specific implements. Technological and use trajectories cross cut the stylistic varieties identified at this stage of analysis. The "flake/other" dichotomy employed in the initial analysis does provide preliminary information on early-phase reduction strategies represented in the biface category. It remains to be demonstrated, however, how early-stage reduction affected secondary reduction techniques, strategies, and ultimately, implement use. Temporal variation in chipped stone biface technologies likewise remains to be fully explicated.

At present, this category contains two general forms of bifaces, triangular and ovate, that have been divided into the flake/other varieties noted above. The majority of these specimens have been thinned, either across both faces or up to midline, which results in a medial ridge. The attribute of thickness, as opposed to length/width dimensions, appears to be a first order criterion for the acceptance or rejection of bifacial materials in the manufactural trajectories represented. A preliminary stratigraphic ordering of bifaces and bifacial debris suggests that this proposition may apply to samples from the major Early Archaic, Benton, and Gulf Formational occupations at the site. However, the large number of bifacial implements included in this category may represent the modification of PP/K manufactural trajectories (for use of bifaces as "convenience" implements?) or wholly separate trajectories for "finished" bifacial implements. Further documentation and analysis of manufactural/use trajectories should include lithic artifacts from related components at all excavated sites in the UTV in order to enhance the soundness of the models developed.

Preforms (1 and 2) $\underline{n}$ = 457 (Figure 8.38 and 8.39)

Material: Table 8.20

Metric Data: Table 8.21

Discussion: The preform category includes primarily manufactural reduction materials. These range from rough, ovate forms that retain cobble cortex on both faces (Preform 1) to styles that exhibit preliminary thinning and minor shaping (Preform 2). Few of the preforms reveal any obvious indications of use. Where edge attrition is apparent, it appears to be, in most instances, the result of scrubbing to accommodate platform preparation. A sizable percentage of the materials classed as Preform Is are fragmentary and therefore will not be amenable to further analysis beyond a morphological categorization as bifacial debris. Those specimens included in the Preform 1 category generally reflect attempts at cortex removal. Cobbles, split cobbles, and large flakes (spalls) appear to be the starting points for the reducton to the Preform 1 stage. Only minor thinning has been accomplished at the Preform 1 stage and the removal of cortical surfaces appears to be the major objective at this stage of reduction.

Preform 2s exhibit little or no cortex and have been thinned and shaped more extensively than examples in the Preform I category. A higher percentage of Preform 2s exhibit edge attrition suggestive of use than encountered in the Preform 1 category. Like the Preform 1s, many specimens classified as Preform 2s are fragmentary and therefore are not conducive to further analysis.

At the present time, it does not appear that cores, as traditionally defined (cf. Crabtree 1972:54-56), were the starting point for reduction to the preform stage (in the majority of instances) during either the Early Archaic or Gulf Formational occupations at 22IT590. Changes are apparent in chipped stone reduction strategies during the Benton occupation and presumably are related to the increased utilization of Fort Payne chert. Early stages in the Benton chipped stone reduction trajectory (for PP/Ks) are not well represented at this or other sites in the UTV.

Temporally-scaled analyses of chipped stone reduction systems will require more detailed examination of the core, biface blade, projectile point/knife, and debitage samples, as well as Preform 1s and 2s, than was possible during Phase I. Clearly, much of the informaion for such an analysis (at 22IT590) is oresent in the Preform and Biface Blade categories.

Cores $\underline{n}$ = 240 (Figure 8.40 and 8.41)

Material: Table 8.22

Metric Data: Table 8.23

Discussion: Of the cores recovered at 22IT590, the majority (70%) are included in the Fragment or Other categories. Over half (57%) of the remaining specimens are divided between the 90° Unifacial and 180° Unifacial categories. Items classified as cores consist almost exclusively of heated or unheated Camden cobbles (locally derived).

The core categories represent, at a minimum, several different reduction stages (and/or trajectories) and used implements. Some of the cores reflect a core-flake technology while others appear to be early stage bifaces (or preforms in the current classification scheme). In addition, some of the specimens classified as cores appear to be "tested cobbles." These items exhibit several random flake scars on what are otherwise unmodified cobbles and probably represent the "testing" of tool-stone quality. It is also conceivable that these and other specimens classified as cores were used as chopping/pounding/crushing "convenience" implements, or at least were secondarily employed in this fashion.

The majority of cores occur above Level 7 in what appear to be contexts repesenting Benton through Mississippian occupations of the site. Cores included in the 90°-360° categories are not as prevalent in Levels 9-12 which contain most of the "diagnostic" Middle and Early Archaic implements recovered during excavation.

At this stage of analysis, few changes are apparent in either the varieties (i.e., 90°, 180°, etc.) or reduction strategies represented in the core category through time. The splittling of cobbles to provide a platform for flake removals is represented in virtually all stratigraphic samples. Also, there is some suggestion, mainly in the form of crushing and/or battering on margins opposite striking platforms, that cobbles were placed on anvils to accommodate flake removals (bipolar technique). The four specimens classified as bipolar cores are small in overall size, but exhibit some of the same characteristics (i.e., polar crushing/battering and stepped/hinged flake scars) found on larger examples in the general core category. A more detailed description of the cores recovered, as well as a better definition of their role in chipped stone technologies through time, will await further analysis conducted in conjunction with studies of other chipped stone categories (e.g., preforms, biface blades, PP/Ks).

Scrapers $\underline{n}$ = 322 (Figure 8.42)

Material: Table 8.24

Metric Data: Table 8.25

Discussion: The sample of scrapers from 22IT590 consists of side, end, and combination side/end forms. The majority of all scraper forms represented have been manufactured on flakes. The scraper category is characterized by specimens exhibiting one or more steeply or slightly beveled, modified edge. The varieties of scrapers identified in the present classification are based on stages in a reduction trajectory (e.g., scraper of a biface), flake morphology (e.g., scrapers on expanding flakes), placement of edge modification (e.g., side and end), edge configuration (e.g., bifacial and unifacial), and multipurpose (e.g., scraper on a core) and reworking (e.g., recycled hafted end) characteristics. Most examples included here are unifacially flaked and lack formal stylistic characteristics. Two forms, a small, unifacial "thumbnail" variety and a slightly larger, unifacial trianguloid ("snub-nose") form exhibit generally stylized formal attributes. The latter forms are best represented in the tentatively defined Middle and Early Archaic horizons at 22IT590, but co-occur with other, less formalized scraper varieties. In many cases, modified edges exhibit rounding and polish suggestive of use as a scraping implement rather than coincidental edge attrition. Many of the end and some of the side scraper forms, but particularly the smaller forms such as the "thumbnail" and trianguloid end scraper varieties, may have been hafted. Cross sections on most of the latter forms are thinned and flattened to some extent as a result of manufacture on a secondary bifacial thinning flake. These were probably used in hide working activities and/or possibly in processing vegetal materials. The largest number of "regularized" scraper forms (i.e., thumbnail and trianguloid varieties) were recovered in Level 9 across the site.

Through time there appears to be a trend toward decreasing emphasis on the formal stylistic attributes of the scraper varieties represented. This may be attributable to the accommodation of scraping activities in other implement categories, although this remains to be documented through further analysis. A review of utilized flake categories also may provide valuable insights on the kinds and extent of activities in which scraping implements were employed during the various occupations of 22IT590.

The scraper category includes items classified as spokeshave of multi-purpose implements that include a spokeshave element. The modified edges on spokeshaves range from broad to narrow, are U-shaped, and are steeply beveled on most examples. The vast majority of spokeshaves are manufactured on flakes and are unifa-

cial implements. Some examples exhibit retouch/modification of edges adjacent to and/or opposite the working edge. This may represent backing to support implement use or the multipurpose nature of these implements. Spokeshaves were recovered throughout the cultural deposit of 22IT590 but are most prevalent above Level 6. Spokeshaves were presumably used in woodworking activities, but also may have been employed in the processing of bone and fibrous matter.

Drills, Perforators, Etc. n = 195 (Figure 8.43)

Material: Table 8.26

Metric Data: Table 8.27

Discussion: This category includes several varieties of what are apparently drilling, piercing, and grooving implements. The greatest morphological variation occurs among the drills represented and some overlap between varieties (e.g., shaft, expanding base, stemmed drills) and categories (i.e., drills, reamers, perforators) is apparent. Indications of use-wear, in the form of rounding, polish, and crushing recorded on the margins and bit faces of drills and perforators, suggest that both rotary and piercing motions are represented. Specimens in the reamer category generally exhibit use-wear restricted to the tip area. The majority of specimens in the drill, perforator, and reamer categories most likely were hafted, as were some of the microliths and microperforators. Gravers generally have been manufactured on thick, irregular shaped flakes and probably were not hafted.

The sample of microliths and microperforators, when combined with some of the perforators and gravers, are suggestive of microblade industry at the site. Most of the latter specimens occur in or below Level 7.

Other Uniface and Biface Tools n = 2674 (Figure 8.44, 8.45, and 8.46)

Material: Table 8.28

Metric Data: Table 8.29

Discussion: A preliminary examination of the categories represented (Table 8.9) revealed general internal consistency, although temporal distributions and assignments to specific component assemblages cannot be ascertained at this stage of analysis. The implements included here range from cutting to chopping implements to adzing and pounding tools. Inferred activity repre-

sentations most likely include food processing and wood working, both of which are best represented within tentatively defined Middle and Early Archaic artifact samples from the site.

Debitage

Analyzed lithic debitage samples from 22IT590 document the consistent and overwhelming use of locally-derived Camden chert. Nonutilized lithic debitage from the Master Block (Table 8.30) provides a representative example of tool-stone utilization a the Ilex site. The analysis of the Master Block sample indicates that 92% of recovered lithic debris (chipped stone) consists of heated and unheated Camden chert. Within the combined Camden size grades (n=78,714), the heated debris sample predominates (77%). The results of this analysis correspond to tool-stone utilization within chipped stone implement categories as presented in the above discussions. The predominance of Camden chert during all periods of occupation at 22IT590 conforms to a pattern recognized throughout the UTV.

Fort Payne chert is the dominant minority type represented at 22IT590 (n=3782). Fort Payne comprises 4% of the total lithic debitage sample from the Master Block. Other minority types combined constitute less than 4% of the total lithic debitage sample from the Master Block. None of these remaining minority toolstone samples appear in significant numbers during any period of occupation. While there is some suggestion that Fort Payne chert occurs with greatest frequency during Benton components at 22IT590, it also appears with relatively high frequency in Middle and Early Archaic horizons. Fort Payne chert most likely was obtained, through trade, from sources in the Tennessee River Valley during all periods of occupation at the Ilex site.

Further analysis of lithic material utilization will be required to refine the trends outlined above. Consideration of the amounts of debitage represented and the distribution of material types within subdivisions (5 cm) of the 10 cm levels will be important aspects of any future studies. This information was not available for comment in the Phase I analysis. In addition, examination of proportionalized debitage from all excavated levels of the site may provide further insights on the relative intensity of the various prehistoric occupations represented at 22IT590.

Ground Stone *n* = 589 (Figures 8.46, 8.47, 8.48, and 8.49)

Material: Table 8.31

Metric Data: Table 8.32

Food processing, tool manufacturing, and wood working implements are represented, along with composite tools and items of adornment. The presence of a bead, gorget fragment, and atlatl weights provide tentative evidence of a lapidary industry at 22IT590, which is best represented in Levels 8-10 (Middle Archaic/Early Archaic?). No clear pattern of distributions or cultural affiliations can be discerned from a preliminary examination of remaining ground stone artifacts, although most were recovered between Levels 7-10.

Not surprisingly, many of the ground stone artifacts were manufactured out of very durable materials, such as conglomerate, quartzite, and ferruginous sandstone. These materials are well-suited for heavy-duty tasks that involve chopping-pounding-grinding. The vast majority of the latter implement forms exhibit no indications of hafting.

Composite tools are represented by the atlatl weights and a single grooved axe. In addition, the gorget and bead in this sample would have required a method of attachment. Four of the atlatl weights and the one bead are made of greenstone. This material probably was acquired through trade with groups residing in the Tennessee River Valley. These greenstone artifacts appear to be temporally-related.

<u>Historic</u> <u>Debris</u>

Limited numbers of historic/modern artifacts were recovered from 22IT590 (Table 8.33). Most of these items reflect recent landuse practices, which include farming, three planting, and construction activity. The relatively small samples of ceramics, glass, metal, and miscellaneous debris are not indicative of specific activities and most items probably are less then 30 years old.

Historic/modern debris was concentrated in the upper level of the site (57%), but also extended into Levels 2 (23%) and 3 (20%). The presence of items below Level 1 may be the result of several factors, including extensive relic digging, cultivation, and tree planting. The recent truncation of the north end of the terrace may have destroyed evidence of historic activity at 22IT590 in addition to the prehistoric occupations projected for this area. Based on the available data, no significant historic component(s) can be identified in the remaining section of the Ilex site.

BIOTIC REMAINS

Flora

Macrobotanical

A preliminary analysis of macrobotanical remains from 22IT590 (Table 8.34) produced limited results. Included for analysis were seven cultural features and seven samples from a control column in Block A-Z (82.75S/194.25W). Four liter samples were collected from the control column for flotation; the volumes of the feature samples included for flotation were variable depending on the volume of the feature fill.

Not surprisingly, identified floral remains are dominated by carbonized hickory nutshells (Carya spp.) and acorn (Quercus spp.) fragments. Carbonized seeds were recovered from the feature samples, but virtually all the specimens were unidentifiable. The presence of hickory nuts and acorns in these samples is consistent with the findings from other Phase I sites (this report). Although nuts appear to have been an important food source during all periods of occupation, their role in the overall economy of any specific cultural component remains to be clarified. Even with the analysis of additional samples from 22IT590, it is probable that the diversity and quantity of plant remains represented will be comparable to the present results. The acidic and highly leached deposits at the Ilex site were not well suited to the preservation of biotic remains. The possible underrepresentation of certain plant remains (e.g., tubers, greens, fruits), together with other qualifying factors (e.g., differential charring, cultural selection, method of preparation, sampling error), likewise are important considerations in the interpretation of these data (see the discussion of floral remains from 22IT563).

The weights of the identified nutshell samples from the control column generally are small (ca. 0.5 g - 4.9 g) and therefore, difficult to interpet. The relatively small size of these samples precludes discussion of possible differences between cultural components. The higher weights (nutshells) recorded in the feature samples can be accounted for by the generally larger volumes of these samples. The presence of relatively large quantities of nutshells in these features may reflect use of this material as fuel.

Pollen

A suite of eight pollen samples was submitted for analysis during Phase I. The analysis of 22IT590 pollen samples was conducted by

Mark C. Sheehan and Donald R. Whitehead of Indiana University. The preliminary report of their results is provided in Table 8.35.

No pollen was identified in three of the samples examined (589-4, 590-5, and 590-8). Pollen counts in the five remaining samples are relatively low and are not of use in a quantitative characterization of the vegetation assemblage. However, a qualitative assessment of the pollen identified in at least one of these samples produced rather surprising results. The pollen suite identified in sample 590-2 is indicative of a spruce-fir forest which includes birch, pine, hickory, beech, and oak. This would suggest a Boreal-type forest (Mark C. Sheehan, personal communication) coeval with late Early Archaic or early Middle Archaic occupations at the Ilex site (Table 8.34). The identification of boreal pollen spectrum at this time depth (ca. 7500-9000 B.P.) is inconsistent with previously reported environmental syntheses from this region (Muto and Gunn 1980; Delcourt and Delcourt 1977).

Current data for the southeastern United States indicate a disappearance of Boreal vegetation after 12,500-12,000 years B.P. Age-estimates for Early Archaic strata at 22IT590 are much too recent to be associated with full-or immediate postglacial environments.

Possible explanations of the Ilex pollen data may include the sampling of older redeposited sediments or possibly, the persistence of a relic stand of Boreal forest on this Pleistocene outlier. In any case, further interpretation of these data will require examinaton of additional samples for on- and off-site locations. Moreover, future investigations should be oriented toward the documentation and refinement of a local environmental chronology, with reference to vegetation models for the surrounding region. Until additional data are generated, the available pollen information will remain an enigmatic aspect of the archaeological record at 22IT590.

Fauna

Faunal remains from 22IT590 consists of a few very small samples of bone fragments recovered and sorted during the flotation analysis. No large faunal remains were recovered during the Phase I investigations. The bone fragments derived from the flotation samples were not submitted for identification. In view of the small size of these samples, it is highly probable that most will be unidentifiable, and therefore of limited interpetive value. In the absence of faunal data from 22IT590, reference can be made to other Phase I sites (i.e., Poplar and Walnut sites)

for possible indicatons of the kinds and quantities of fauna represented throughout the cultural sequence.

Human Remains

Human skeletal remains from the Ilex site are limited to a single occurrence designated Feature 64 (see Figure 8.21). This feature was located in Block A-X (Figure 8.9) and consisted of several badly decomposed bone fragments. The best preserved of these fragments appeared to be a long bone segment (femur?) that was oriented in an upright position within the deposit. A very faint color change may have marked a pit outline, although the exact boundaries and level of origin of this feature could not be determined. Feature 64 probably was a secondary burial in a small pit.

No attempt was made to remove the bone for further study. This feature was located in profile and the poor condition of the bone prevented rapid extraction of samples for additional study. There were no obvious artifact associations or additional interments in the vicinity of Feature 64.

DISCUSSION AND INTERPRETATION

SITE FORMATION

The cultural deposits at 22IT590 are contained on and within a terrace that extends northward from an upland ridge. The ridge line comprises the southern boundary of the Mackeys Creek Valley. The terrace apparently had a lobate outline prior to being truncated on the north end during construction activity. Terrace deposits include fluvial and colluvial materials associated, respectively, with overbank deposition from Mackeys Creek and slope wash from the upland ridge adjoining the terrace to the south (Figures 8.1 and 8.15). This relatively large, flat-topped terrace lies in the floodplain of Mackeys Creek approximately 6 km northeast of the confluence of this stream and Big Brown Creek. This juncture forms the Tombigbee River and associated alluvial valley.

The stratigraphic sequence at the site is comprised primarily of sandy loams and loamy sands. Deposits on the north end of the site have been heavily modified through cultural activity within approximately the upper 1-1.30 m of the sequence. Stratigraphic units in this area exhibit intensive organic staining, extensive leaching of organics and the inclusion of relatively large quantities of cultural debris. Central and southern segments of the

terrace have profiles lacking this evidence of intensive and/or long-term culture modification. Correspondingly, artifact concentrations in the latter areas decreased considerably from those encountered within the northern segment of the terrace.

From all appearances, the man-made truncation of the terrace on the north end destroyed a considerable portion of the cultural deposits at 22IT590. At the start of Phase I excavations, the Ilex site was located ca. 30-60 m southeast of Mackeys Creek. It is probable, therefore, that portions of the terrace formerly situated closer to this watercourse contained cultural deposits at least as extensive as those investigated during Phase I.

As noted earlier, the terrace deposits at 22IT590 are comprised of fluvial and colluvial materials. An unnamed creek west of the site (Figure 8.1) drains the uplands to the south and provided sediment deposited primarily in northwestern sections of the terrace. This same drainage may have increased erosion in this area on a seasonal basis.

The age of this unnamed drainage cannot be ascertained. However, it would appear that the erosive action of this watercourse removed remnants of the Late Pleistocene/Early Holocene terrace deposits found in other sections of the terrace. These early terrace sediments underlie the western margins of the site as a strip oriented in a north-south direction, with a maximum width of ca. 20 m. The eastern edge of this deposit has been cut, presumably by Mackeys Creek, and filled with a sequence of fluvial sands and silts, interfingered with colluvium in central and southern areas of the terrace. This early terrace remnant is overlain by fine to medium sands ranging from yellow to nearly white in color. These sands exhibit massive bedding characteristics, no stratification, and dip downward in a southeasterly direction. This configuration apparently resulted from fluvial deposition within a cut or scour to the east of the buried terrace sediments, which produced a sediment mantle overlying the terrace remnant on the western margin of the site.

Gradual, relatively low energy sedimentation is reflected in stratigraphic profiles across the site. However, the gradient of Mackeys Creek is greater than the Tombigbee River and as a result, sediments are relatively coarser at 22IT590 than at sites excavated in the UTV. Fine to medium sand and silt deposits reach depths of over 3 m on the north end of the site.

Lamellae are prominent features in these deposits, but are confined to the northernmost section of the site. Lamellae vary from several centimeters up to ca. 25 cm thick and most are nearly horizontal, but undulating, in cross section. Several of these features isolated in cross section occurred as swirls that were nearly vertical in orientation. In plan view, lamellae ap-

pear as broad, often discontinuous bands of dark-colored sediment. Both upper and lower boundaries of these phenomena characteristically are wavy.

Several observations can be offered regarding the genesis of lamellae at 22IT590. Lamellae have been recorded at numerous sites in the Upper Tombigbee Valley in addition to 22IT590 (22IT539, 22IT621, and 22MO656) and in every instance these features exhibit similar characteristics. The morphology and internal constituents of these features suggest formation resulting form the leaching of fine-fraction sediments (colloids). The collection of these sediments in continuous horizons probably is the result of a perched water table that produces a barrier to further downward movement. However, alternative interpretations also may have validity and will be discussed below. The accumulations of colloids that form these distinct bands commonly cross cut stratigraphic boundaries. This evidence indicates that these features post-date the deposition of the terrace strata. Similar evidence was obtained at all sites containing lamellae in the Phase I program and has been recorded at other excavations in the Southeast (Foley and Chapman 1977:192-193).

The relationships between the formation of lamellae and cultural activity is not entirely clear. Foley and Chapman (1977) have suggested that the disturbance of surface soils in conjunction with periods of heavy rain may enhance the downward movement and accumulaion of colloids in cultural deposits. They also note that lamellae do not occur within their study area where evidence of cultural activity is lacking (Foley and Chapman 1977:193). Although elements of the model provided by Foley and Chapman correspond to the situation at 22IT590 and other sites in the area, lamellae do occur in noncultural environments within the UTV.

The oldest strata examined were contained within the Late Pleistocene terrace remnant on the western margin of the site. Cultural debris was contained within the Late Pleistocene/Early Holocene terrace remnant and thus comprises the oldest cultural activity at the Ilex site. The loamy sands that made up this old terrace were deposited over 10,000 years ago during the last major episode of stream degradation.

The majority of Early Archaic and Middle Archaic artifacts are contained within Early Holocene fluvial sands deposited during intermittent periods of stream aggradation. Seasonal overbank deposition continued on an intermittent basis until ca. 6000 B.P. An unconformity occurs between Middle and Late Archaic components and some erosion of the cultural deposit may have occurred during localized episodes of scouring.

The cultural midden deposit in the upper portion of the terrace sequence has obscured stratigraphic boundaries. The leaching of

organics through underlying strata is a prominent feature of the terrace sequence. A second major period of aggradation began after ca. 6000 B.P. and continued through the most recent occupations at the site. Moderate to fine sands were deposited during this episode and comprise the mineral fraction of the cultural midden.

Point bar deposits apparently formed on the north and east section of the terrace during the Early Holocene, but most have been removed or altered during recent construction activity in the area. Water flow was from the southeast to the northwest and the stream channel most likely stayed in this position until ca. 6000 B.P. after which it apparently occupied its present course.

The complex relationship between natural and cultural processes is manifested in the stratigraphic record contained within the cultural midden deposit at the Ilex site. The extensive leaching of organics in this zone masked stratigraphic boundaries and hampered interpretation of cultural material distributions. Like other midden sites in the Upper Tombigbee Valley and eastern North America, the depositional record at 22IT590 contains a wealth of information. Correspondingly, any future analysis of 22IT590 will require further consideration of the terrace depositional sequence containing the archaeological record.

COMPONENTS

Excavation and analysis of cultural material from 22IT590 has documented the long cultural history of this site. Cultural components spanning Early Archaic to Mississippian period occupations were represented in various degrees of intensity and/or duration. From the start of excavations at the Ilex site, it was apparent that Archaic artifacts were present in the lower levels of the cultural deposits. Equally apparent, however, was the degree of disturbance and mixing of cultural debris present in the upper levels of the site. The decision to emphasize recovery of information on the Archaic occupations was made only after careful consideration of the research goals of the Phase I program by government representatives and project staff. The excavation of large areas of the Archaic cultural deposits at the site was made possible only by sacrificing upper stratigraphic units and included cultural debris. Artifact samples from the site therefore reflect this sampling strategy, as do other data categories derived from the Phase I excavations.

The purpose of this section is to provide a preliminary description of the artifact assemblages and cultural components represented and to address areas that require further study. The analysis of the large volume of cultural debris recovered at the

Ilex site is far from complete. In order to accommodate the present status of analysis and the information available for discussion, it has been necessary to emphasize certain forms of data in the present review. Chronological ordering of the occupations has been conducted primarily through a seriation of projectile point/knife, and to some extent, ceramic types. Although such an analysis is traditional and draws on information from sites and studies in the surrounding region, a variety of factors minimize the effectiveness of this approach at sites in the Upper Tombigbee Valley. Two such factors are the multicomponent nature of the sites investigated and the absence of local chronological-typological sequences for comparison within the immediate area. Despite these and other problems, an outline of the culture history of the Ilex site can be presented, but will require elaboration and refinement that can only be accomplished through further study of the 22IT590 data sets.

To facilitate the assessment and interpretation of cultural components at 22IT590, selected data derived from the preceding discussions are summarized below. Table 8.36 presents a comparison of concentration indices (number of items per level divided by the number of excavated levels) for materials recovered from the Master Block excavation area (see Table 8.1 for description of the Master Block). This proportional representation of material categories reveals peak densities within the Master Block which provides a relative measure of the intensity of the respective occupations. As indicated in Table 8.36, cultural material concentrations are greatest in the upper levels, but also are high in levels containing all or portions of Late and Middle Archaic assemblages (Levels 7-9). Similar patterns of material concentrations can be projected for other excavated areas of the site.

The chronology of occupations at the Ilex site has been identified primarily on the basis of a seriation of projectile point/knives types or clusters. The radiocarbon assays presented earlier and graphically displayed in Figure 8.50, with two notable exceptions (DIC-2039, 2040), were not within an acceptable age-range for the cultural deposits and included cultural materials.

The projectile point/knife sample from the site was seriated using prior typological studies from the area as a guide to classification. The terms "complex" and "cluster" have been used to identify the temporal position, cultural affiliation, and morphological variation of PP/K samples. A projectile point/knife complex refers to all the categories that can be assigned to a specific period of prehistory regardless of morphology or other irrelevant aspects of style. A PP/K cluster simply accommodates the variation in form, and possibly use, that occurs in most defined typological categories. Clusters thus reference the max-

imum variation incorporated in designated type categories, while a complex represents the combination of all temporally-related categories (clusters).

The distribution of projectile point/knife complexes from the Master Block is presented in Figure 8.51. The overlap between temporally-defined complexes of PP/Ks is apparent in this graph, particularly within Late Archaic and Middle Archaic assemblages. Trends in these data are apparent, however, and when combined with other forms of data, provide a general correlation of stratigraphic and type category distributions. The combined evidence from 22IT590 suggests the following stratigraphic distribution of PP/K complexes: Levels 1-4, mixed Mississippian-Woodland (Miller I-III) and Gulf Formational (Wheeler and Alexander); Levels 5-8, Late Archaic (Benton); Levels 7-9, Middle Archaic; and Levels 9-12, Early Archaic. The use of arbitrary levels and the horizontal collapsing of various excavation blocks into a single analytical unit (Master Block) obscures some of the distinctiveness between stratigraphic levels. To compensate for this mixing of cultural materials, several excavation blocks were horizontally and vertically subdivided to provide tighter control over the provenience of recovered materials. Analysis of these distributions must await future research, but a refinement of stratigıaphic and PP/K data sets is possible and will no doubt provide further clarification of the chronology of occupations at 22IT590.

Early Archaic

Early Archaic occupations at the Ilex site are identified by a projectile point/knife complex that includes Beaver Lake, Big Sandy, Dalton, Greenbrier, and Kirk stylistic clusters. Cypress Creek hafted bifaces also occur in early stratigraphic contexts, but appear to represent either very late Early Archaic occupations or a transition into the Middle Archaic. Although the temporal position of Cypress Creek cannot be resolved at present, most of the recovered specimens appear to be concentrated in slightly higher stratigraphic positions within the cultural deposit than the other styles noted above. Stratigraphic and radiocarbon data from 22IT539 likewise suggest that Cypress Creek point styles date somewhat more recently in time than those included in the Early Archaic complex.

Early Archaic projectile point/knife clusters were recovered with greatest frequency from the Master Block excavation area in Levels 9-11 (Figure 8.51). The stratigraphic position of these PP/Ks is consistent with the general chronology of occupaions at the site and the relative age of the cultural strata defined in the Master Block. However, attempts to date the Early Archaic

occupations were unsuccessful. The radiocarbon dates obtained cluster around 6000 years B.P. and are inconsistent with previously reported dates on Early Archaic manifestations in eastern North America (Chapman 1977; Broyles 1971; Griffin 1974). The relatively recent ages of the assays from 22IT590 most likely reflect the downward migration of organics associated with the formation of lamellae, as well as bioturbation of the cultural deposit.

Kirk, Greenbrier, and Dalton clusters predominate in the Early Archaic hafted biface sample from 22IT590. Multiple implement uses appear to be represented in each of these clusters. General blade morphology, retouching patterns, beveling, and serration provide evidence of the multipurpose life histories of included specimens. Kirk styles, in particular, reveal consistent alternate edge beveling in the 22IT590 sample, indicative of resharpening conducted while the specimen remains in the haft. This type of resharpening implies use as a knife or general cutting implement.

The stylistic characteristics of the projectile point/knife complex vary from long, lanceolate forms, such as Beaver Lake and Greenbrier, to small, corner-notched Kirk forms. The morphological diversity present in this sample implies a significant temporal span for Early Archaic occupations at 22IT590. Based on typological and stratigraphic evidence, Early Archaic occupations at Ilex site probably fall within a 2000-year period, beginning ca. 10,500 B.P. and grading into the Middle Archaic at ca. 8500 B.P. (ca. 8500-6500 B.C.).

Other aspects of Early Archaic assemblages from the Ilex site are difficult to assess at this stage of analysis. More specifically, the assemblage content of any single Early Archaic component, such as Dalton or Kirk components, is unclear at present. However, Early Archaic manifestations at 22IT590 generally are represented by a wide range of implement forms. Included are a variety of scrapers and drills, as well as bifacial reduction products and by-products. Scraper forms represented are dominated by small, unifacial varieties (ca. 96% of scrapers recovered from Levels 10-11 in Master Block), with well-defined "thumbnail" or "keeled-end" styles common occurrences. Other implement varieties, although not stylistically distinctive, apparently include gravers, perforators, reamers, adzes, choppers, unifacial and bifacial knives, chisels, wedges, and a small number of ground stone items dominated by ground hematite and limonite and ground flakes. A single ground atlatl weight (greenstone) associated with Early Archaic levels in the Master Block appears to be out of context and presumably originated in an overlying Middle Archaic component.

Debitage samples conform the the trend in all Ilex site components as heated Camden chert predominates followed by Camden in unaltered form. Fort Payne is well represented and dominates minority raw material types in Early Archaic samples.

Features assigned to Early Archaic occupations of the Ilex site consist exclusively of pits (2). Pits probably were employed for the storage of foodstuffs throughout the occupations. As noted earlier, feature information from all components is limited and generally difficult to interpret.

Settlement of the Ilex site during the Early Archaic appears to have consisted of relatively short-term (seasonal) camps, but also may have included longer-term base camp occupations. The diversity of implements and artifacts represented is suggestive of base camp settlement(s), although the relatively low number of items in any category combined with the proposed span of Early Archaic occupations could easily account for this occurrence. At present, the evidence from the Early Archaic horizons can be best interpeted as reflecting intermittent, seasonal occupations by extended families or small bands. The seasonal scheduling of the Early Archaic occupations cannot be determined with the present data.

Middle Archaic

Projectile point/knife styles associated with Middle Archaic occupations at the Ilex site include Eva, Morrow Mountain, Sykes-White Springs, Vaughn, and Beachum. As noted above, there is evidence to suggest that Cypress Creek styles also date to the Middle Archaic, most likely during the early portion of this period, perhaps as a transitional form.

Eva, Sykes-White Springs, and Morrow Mountain clusters predominate in the combined Middle Archaic assemblage. Like the preceding Early Archaic manifestations, Middle Archaic components cannot be precisely defined at this stage of analysis. In general, the Middle Archaic clusters do not exhibit patterns of use-wear or the degree of internal diversity noted in the Early Archaic clusters. The typological variation present in the Middle Archaic complex, in conjunction with the stratigraphic contexts of these materials, implies an age-range from ca. 8500 B.P. to 6000 B.P. (ca. 6500-4000 B.C.). Multiple cultural components presumably are reflected in the different PP/K clusters identified in the Middle Archaic assemblage and suggest intermittent occupation of the site throughout this period.

Apart from the projectile point/knife complex, there are few notable differences in other aspects of the material assemblage

from the preceding Early Archaic occupations. Material densities overall appear to increase slightly, although the diversity represented in implement categories does not appear to change significantly. Scraper forms generally lack the stylization noted in the Early Archaic assemblage and drills-perforators increase in number during the Middle Archaic. Another difference occurs in the ground stone categories which increase significantly in both number and diversity during this period. Perhaps the most obvious difference in Middle and Early Archaic occupations, however, is contained in the depositional record of these manifestations. Despite extensive leaching of organics from overlying occupations, there is evidence to suggest the accretion of a cultural midden during late Middle Archaic occupations at 22IT590. Charcoal flakes and staining increase dramatically in Levels 7-8 and midden development at this depth cannot be attributed solely to the processes of leaching, weathering, and bioturbation.

The formation of a cultural midden associated with Middle Archaic occupations at Ilex is consistent with evidence from other Phase I sites (22IT539 and 22IT576). Midden formation associated with Middle Archaic occupations may be a direct result of changes in subsistence/settlement patterns. Settlements of longer duration, and possibly of greater intensity, most likely produced these cultural middens. This pattern may correspond to base camp, rather than temporary camp, settlement types at this time depth throughout the UTV. Such a pattern appears to be well established by the Late Archaic period, as represented by Benton components at Phase I sites. Further examination of Middle Archaic material assemblages may provide additional evidence of settlement pattern changes during the latest portion of this period. Changes in settlement patterns, probably are linked to changes in subsistence strategies. The seasonality of occupations, the scheduling of resource procurement, and the cultural selection of resources appear to have changed during the Middle Archaic, thus marking the establishment of a pattern that is best documented in Late Archaic manifestations throughout eastern North America. Continuing analysis of 22IT590 data, as well as other Phase I site data, during Phase III may provide support for this proposition. The relationship between late Middle Archaic and early Late Archaic components in the UTV will require further clarification, as both the nature and temporal placement of proposed cultural changes are poorly defined at present. The magnitude of cultural changes occurring between Middle and Late Archaic components appear to be great in the UTV and continued examination of this transition constitutes a major problem domain for future research.

Late Archaic

Late Archaic occupations a the Ilex site are identified by a large and diverse Benton projectile point/knife cluster. Benton components appear to dominate activity at the site during the Late Archaic, although a small terminal Late Archaic component may be represented by McIntire and Ledbetter/Pickwick PP/Ks in this assemblage. The presence of a terminal Late Archaic component is problematical, but even if present, will be difficult to define in view of the limited data and the extent of mixing within overlying ceramic bearing components.

Benton component assemblages are characterized by the diversity of forms and attendant uses represented in the projectile point/knife cluster. Benton PP/Ks dominate the chipped stone assemblage and modification of these points into secondary implement forms (e.g., drills and scrapers) is extensive. A wide range of uses therefore is represented within the variant categories of Benton PP/Ks (e.g., projectiles, knives, scrapers, multipurpose implements). The accommodation of many use classes through subtle variations in a central stylistic theme marks a major typological shift from patterns evolving out of the Early and Middle Archaic periods.

Significant differences also occur in manufactural trajectories (principally chipped stone) and patterns of lithic raw material procurement. The focus of these changes appears to revolve around an increased use of Fort Payne chert in the manufacture of bifacial implements. Large "blades" of Fort Payne chert apparently were acquired through trade with populations in the Tennessee River Valley to the northeast. These blades commonly are the starting points in the manufacture of Benton PP/Ks. This technological shift is reflected in Preform and Biface Blade categories, as well, both by changes in bifacial reduction strategies and an increase in the occurrence of Fort Payne chert.

Changes in other aspects of Benton assemblages primarily consist of larger numbers of items in the material categories represented. These increases correspond to stratigraphic evidence indicating larger resident populations and/or more intensive occupational activity associated with longer-term settlement of the site during the Benton components.

The two dates (DIC-2039, 2040) obtained on Benton occupations of 22IT590 average 3794 B.C. In view of the thickness of the Benton horizon (ca. 20-40 cm), occupations may span as much as 1000 years from ca. 6000 B.P. to 5000 B.P. (ca. 4000-3000 B.C.). However, the principal Benton occupations at 22IT590 appear to be encompassed within a 500-year period from ca. 4000-3500 B.C. This age-range is consistent with the dates and evidence of Benton components obtained from other Phase I sites.

The cultural midden produced during the period of Benton occupations reflects the accumulation of large quantities of occupational debris, especially organic substances. This extreme alteration of natural soil forming processes can be attributed to shifts in subsistence/settlement patterns and perhaps to a general increase in resident populations. The deposition of organics such as nutshells appears to correspond to longer-term or base camp settlement of the site by Benton peoples. The intensity of occupation inferred from the organic richness, material densities, and physical alteration of the Benton horizon was not produced by a pattern of short-term, intermittent, seasonal occupations. The weight of evidence accumulated during the Phase I program supports an interpretation of intermittent, semipermanent occupations of sites throughout the UTV by Benton peoples on more stable geomorphic surfaces. As indicated earlier, the origin of this pattern of settlement, and possibly subsistence, may lie in the Middle Archaic. However, the apex of these patterns culminates in Late Archaic settlement of this area and marks the beginnings of general lifestyles that persist in the UTV into the most recent episodes of prehistoric occupation.

External ties are well-developed during the Late Archaic, although there appears to be an especially strong relationship between peoples residing in the Middle Tenessee Valley and the UTV. The possibility that Benton occupation of the UTV occurred during a general expansion of peoples out of the Middle Tennessee Valley is not inconceivable and should be considered in more detail during future studies.

Post-Late Archaic

The transition out of the Late Archaic at 22IT590 is marked by the abrupt appearance of ceramics. Stratigraphically, ceramics first appear in significant numbers between Levels 4 and 5. The number of ceramics recovered increases in the upper levels of the deposit with the largest concentration occurring in Level 1 across the site.

As noted in previous sections of this report, segregation of the ceramic-bearing components represented in the upper four levels of the site has not been possible. Ceramics spanning the period from Gulf Formational Wheeler (ca. 900-500 B.C.) to Mississippian (ca. A.D. 1000-1550) occupations are present in the Ilex assemblage. Alexander Series (Gulf Formational) and Woodland Miller (I-III?) sherds are best represented in the ceramic assemblage and may comprise the major occupations of the Ilex site during this period. Projectile point/knife clusters are not as useful as temporal markers within the period of ceramic-bearing occupations, but generally form a typological sequence encompass-

ing the full range of Gulf Formational, Woodland, and Mississippian occupations reflected in the ceramic assemblage.

The intensity and/or duration of these late components, as indicated by the depositional record at 22IT590, appears to be only slightly reduced from the preceding Benton occupations. The representation of nearly 2500 years of prehistoric occupation within a 40-50 cm thick deposit implies infrequent use of the site during any of the ceramic-bearing components. This evidence combined with the strong midden development associated with ceramic-bearing occupations suggests the persistence of the pattern of intermittent, semipermanent occupations discussed earlier. Further elaboration of this pattern or the components represented must await additional analysis.

DIRECTIONS FOR FUTURE RESEARCH

The archaeological excavations at 22IT590 have produced a wealth of information which has only been preliminarily described in this report. However, this description has identified those data sets which were intact and hold a high information potential. Also, those data sets which hold low information potential were identified. Classification and analytical methods have been tested and weak areas identified. The main purpose of this report was to perform just those tasks.

At this time, with the descriptive report completed and the data ordered and stored, it is now possible to direct the path of the next step of analysis of the Ilex site. These directions are listed below.

1. Cultural material and features from the Early through Initial Late Archaic Benton component appear to be intact. This includes the initial Late Archaic (Benton), Middle Archaic (Eva?), and Early Archaic (Kirk?) components. These can be fairly well isolated and have diverse assemblages. With the scarcity of intact deposits from these cultural periods in the Mid-South, further analysis is warranted. The analysis should be conducted from approximately Level 6 to the base of excavations in the units in the northern portions of the site. The analysis called for is primarily locational (where things are), what occurs together (distribution of clusters), and comparative. This procedure should identify assemblages, activity areas, and the range of activities conducted through time. This information will form a baseline of comparision with models of early Holocene climate and similar models from other sites in the Upper Tombigbee Valley.

2. The specimens within the Early through initial Late Archaic components at the Ilex site should undergo a higher level of classification so that higher level questions can be addressed to the data sets. The classification should include four trajectories: technological, functional, morphological, and use phase. These classifications combined with the analytical techniques discussed above, will extract sophisticated information from these rare deposits. This procedure is efficient and powerful, and will maximize the strengths of the collections.

3. In order to more fully understand the nature of the human occupations of this site, the formation of the site itself should undergo further analysis. This study can be performed from the large number of scale drawings of over 400 m of profiles, hundreds of soil samples, and photographs of the stratigraphy. This should result in a model which depicts the morphology of the site through time initiating with the formation of the old terrace deposit in the western site area.

While these directions of future research at the Ilex site are definitely at a higher level of analysis, the methods and techniques are relatively simple and uncomplicated. Archaeology has devloped means by which to perform these analyses fairly efficiently. The rarity of these intact early deposits call for the next level of analysis. A *preliminary* site chronology has been established and the lifeways of the human groups that occupied this site can and should be addressed. This will contribute significantly to our understanding of the cultural processes which were operating in the mid-South between 5000 and 12,000 years ago.

Table 8.1. Description of Controlled Excavation Units at 22IT590.

Unit	Size	Provenience	Levels Excavated
Block A-W	4 m x 4 m	87S/201W, 87S/199W, 89S/201W, 89S/199W	All units 8-12; 89S/201W 8-17
Block A-X	4 m x 8 m	87S/196W, 87S/194W, 87S/192W, 87S/190W, 89S/196W, 89S/194W, 89S/192W, 89S/190W	All units 5-12; 87S/194W 5-16
Block A-Y	4 m x 4 m	82S/201W, 82S/199W, 84S/201W, 84S/199W	All units 5-12
Block A-Z	4 m x 4 m	82S/196W, 82S/194W, 84S/196W, 84S/194W	All units 1-12
Block B	4 m x 4 m	70S/182W, 70S/180W, 72S/182W, 72S/180W	All units 8; 72S/182W 1-13; 72S/180W Quadrant 9-1-A of Level 9
Block C	4 m x 4 m	126S/202W, 126S/200W, 128S/202W, 128S/200W	All units 1-13; 126S/202W Seg. B of Level 14 removed as macrobot., Seg. A unexcavated
Block D	10 m x 10 m	113S/177W, 113S/175W, 113S/173W, 113S/171W, 113S/169W, 115S/177W, 115S/175W, 115S/173W, 115S/171W, 115S/169W, 117S/177W, 117S/175W, 117S/173W, 117S/171W, 117S/169W, 119S/177W, 119S/175W, 119S/173W, 119S/171W, 119S/169W, 121S/177W, 121S/175W, 121S/173W, 121S/171W, 121S/169W	No units excavated; area was stripped to expose features.
Block E	4 m x 4 m	83S/187W, 83S/185W, 85S/187W, 85S/185W	All units 8 - 14-1; 85S/187W 8 - 14-2; 83S/185W 8 - 15
Block F	4 m x 4 m	96S/182W, 96S/180W, 98S/182W, 98S/180W	All units 8-12; 96S/180W 8-14

Table 8.1. (Continued)

Unit	Size	Provenience	Levels Excavated
Block G	4 m x 4 m	87S/206W, 87S/204W, 89S/206W, 89S/204W	All units 7-12
Block H	4 m x 4 m	92S/201W, 92S/199W, 94S/201W, 94S/199W	All units 7-11; 94S/199W 7-12
Block J	2 m x 2 m	80S/204W	2-12; Level 1 mixed with backhoe spoils and discarded
MASTER BLOCK	Analytical Unit	Combined provenience for Blocks A-W, A-X, A-Y, A-Z, G, and H.	See above
Test Pit 1	1 m x 1 m	64.2S/184W	Described strata
Test Pit 2	1 m x 1 m	62S/174.8W	1-17
Test Pit 3	1 m x 1 m	75.4S/171.2W	1-13
Test Pit 4	1 m x 1 m	92S/167.8W	1-15
Test Pit 5	1 m x 1 m	107S/167.6W	1-13
Test Pit 6	1 m x 1 m	119.8S/167W	1-10
Test Pit 7	1 m x 1 m	135.2S/165.8W	1-11
Test Pit 8	1 m x 1 m	68.2S/187.2W	1-15
Test Pit 9	1 m x 1 m	75.6S/196W	1-15
Test Pit 10	1 m x 1 m	82S/203.2W	1-17
Test Pit 11	1 m x 1 m	91.8S/215.2W	1-11
Test Pit 12	1 m x 2 m	130S/198W	1-10
Test Pit 13	1 m x 2 m	115S/184W	1-13
Test Pit 14	1 m x 2 m	91S/184W	1-13
Test Pit 15	1 m x 2 m	132S/226W	1-7
Test Pit 16	1 m x 2 m	145S/184W	1-11
Test Pit 17	1 m x 2 m	111S/206W	1-11
Test Pit 18	1 m x 1 m	92.4S/220.4W	1-13
Test Pit 19	1 m x 2 m	148S/212W	1-11
Test Pit 20	VOIDED		
Test Pit 21	1 m x 2 m	84S/150W	1-10

Table 8.2. Site 22IT590: Particle Size Distribution of Selected Soil Samples.

Depth cm	Sand 2-0.05 mm %	Silt 0.05-0.002 mm %	Clay §0.002 mm %	Texture
0-15	81.7	13.7	4.6	Loamy sand
15-30	70.9	21.7	7.4	Sandy loam
30-50	70.8	22.9	6.3	Sandy loam
50-59	69.2	22.5	8.3	Sandy loam
59-69	74.2	16.2	9.6	Sandy loam
69-79	68.0	20.4	11.6	Sandy loam
79-116	64.9	20.4	14.7	Sandy loam
116-144	81.4	14.0	4.6	Loamy sand
144-203	46.0	38.6	15.4	Loam
203-232	83.5	8.9	7.6	Loamy Sand

Sand Fraction

Depth cm	Very Coarse 2-1 mm %	Coarse 1-0.5 mm %	Medium 0.5-0.25 mm %	Fine 0.25-0.10 mm %	Very Fine 0.10-0.05 mm %
0-15	3.70	16.70	32.50	25.40	3.40
15-30	0.10	0.40	17.50	44.10	8.80
30-50	0.30	0.30	17.30	44.50	8.70
50-59	0.04	0.20	18.50	42.90	7.60
59-69	0.04	0.20	22.40	45.50	6.00
69-79	0.10	0.30	18.70	41.70	7.20
79-116	0.03	0.30	17.40	39.60	7.60
116-144	0.04	0.40	24.20	50.40	6.40
144-203	0.10	1.40	14.10	25.20	5.20
203-232	0.03	0.30	41.70	38.90	2.60

Table 8.3. Site 22IT590: Organic Matter, Free Iron Oxide, Total and Organic Phosphorous Contents, and pH of Representative Pedon.

Depth cm	Organic Matter %	Fe2O3 %	Total P ppm	Organic P ppm	pH
0-15	3.00	1.23	353.5	117.0	4.9
15-30	1.25	1.65	230.8	21.0	5.7
30-50	1.33	1.51	427.7	158.4	5.8
50-59	1.53	1.65	277.2	-	5.8
59-69	1.13	1.65	250.8	10.7	5.6
69-79	1.20	2.17	184.2	-	5.7
79-116	1.40	1.97	286.7	109.9	5.6
116-144	0.36	0.67	267.0	178.0	5.7
144-203	0.10	1.08	110.5	20.5	5.5
203-232	0.07	0.58	58.5	-	5.6

- = Not detected by analytical methods used.

Table 8.4. Site 22IT590: Radiocarbon Determinations

Lab. No. DIC-2039 Field No. 590-2507

T1/2 5568: 5560±70
T1/2 5730: 5727±70
Calendric date (uncorrected; T1/2 5730): 3777 B.C.
(corrected T1/2 5730): 4460 B.C.
Sample: Carbonized nutshells and wood charcoal
Provenience: 22IT590, L. 5-2 (96.85-96.80)
Comments: This date is consistent with the stratigraphic position of the sample and is within an acceptable age-range for the Benton component at 22IT590.

Lab. No. DIC-2040 Field No. 590-2058

T1/2 5568 5590±75
T1/2 5730 5758±75
Calendric date (uncorrected; T1/2 5730): 3540 B.C.
(corrected T1/2 5730): 4210-4260 B.C.
Sample: Carbonized nutshells and wood charcoal
Provenience: 22IT590, L. 6-1 (96.80-96.75)
Comments: This sample stratigraphically lies below sample DIC-2039 and is consistent with that assay.
This date is associated with the Benton component.

Lab. No. DIC-2042 Field No. 590-2514

T1/2 5568 5610±75
T1/2 5730 5778±75
Calendric date (uncorrected; T1/2 5730): 3828 B.C.
(corrected T1/2 5730): 4480 B.C.
Sample: Carbonized nutshells and wood charcoal
Provenience: 22IT590, L. 9-1 (96.50-96.45)
Comments: This date although older than DIC-2040 appears to be somewhat too recent in age based on the stratigraphic context and associated cultural debris.
A Middle Archaic component is associated with this sample.

Table 8.4 (cont.)

Lab. No. DIC-2043 Field No. 590-2515

T1/2 5568 5880±70
T1/2 5730 6056±70
Calendric date (uncorrected; T1/2 5730): 4106 B.C.
(corrected T1/2 5730): 4730-4840 B.C.
Sample: Carbonized nutshells and wood charcoal
Provenience: 22IT590, L. 10-1 (96.40-96.35)
Comments: This sample is part of a suite derived from the Early Archaic horizons at 22IT590 (see samples DIC-2043-2045, 2036); all of these samples appear to have been contaminated through the mixing of more recent dating organic debris and are not consistent with previous dates on the Early Archaic.

Lab. No. DIC-2044 Field No. 590-2516

T1/2 5568: 5710±100
T1/2 5730: 5881±100
Calendric date (uncorrected; T1/2 5730): 3931 B.C.
(corrected T1/2 5730): 4750 B.C.
Sample: Carbonized nutshells and wood charcoal
Provenience: 22IT590, L. 10-1 (96.40-96.35)
Comments: This sample is part of a suite derived from the Early Archaic horizons at 22IT590 (see sample DIC-2043-2045, 2036); all of these samples appear to have been contaminated through the mixing of more recent dating organic debris and are not consistent with previous dates on the Early Archaic.

Lab. No. DIC-2045 Field No. 590-2517

T1/2 5568: 6030±90
T1/2 5730: 6211±90
Calendric date (uncorrected; T1/2 5730): 4261 B.C.
(corrected T1/2 5730): 4990 B.C.
Sample: Carbonized nutshells and wood charcoal
Provenience: 22IT590, L. 10-2 (96.35-96.30)
Comments: The date derived from this sample is too recent (see comments for sample DIC-2044 above).

Lab. No. DIC-2036 Field No. 590-2519a

T1/2 5568: 6160±175
T1/2 5730: 6345±175
Calendric date (uncorrected; T1/2 5730): 4395 B.C.
(corrected T1/2 5730): 5100 B.C.
Sample: Carbonized nutshells and wood charcoal
Provenience: 22IT590, L. 11-2 (96.25-96.20)
Comments: The date derived from this sample is too recent (see comments for sample DIC-2044 above).

Table 8.4 (cont.)

Lab. No. DIC-2041 Field No. 590-2523

T1/2 5568 6020±85
T1/2 5730 620C±85
Calendric date (uncorrected; T1/2 5730): 4250 B.C
(corrected T1/2 5730): 4980 B.C.

Sample: Carbonized nutshells and wood charcoal
Provenience: 22IT590, F-34, L. 10
Comments: The date obtained on Feature 34 suggests an association with the Middle Archaic component at 22IT590. Stratigraphically, F-34 appeared to originate near the base of the Benton horizon.

Lab. No. DIC-2032 Field No. 590-3501

T1/2 5568: 6110±75
T1/2 6293: 6293±75
Calendric date (uncorrected; T1/2 5730): 4343 B.C.
(corrected T1/2 5730): 5050 B.C.
Sample: Carbonized nutshells and wood charcoal
Provenience: 22IT590, L. 9-1 (96.50-96.45)
Comments: This assay is consistent with the stratigraphic position of the sample and is within an acceptable age-range for the Middle Archaic component at 22IT590.

Lab. No. DIC-2033 Field No. 590-3502

T1/2 5568: 6130±80
T1/2 5730: 6314±80
Calendric Date (uncorrected; T1/2 5730): 4364 BB.C.
(corrected T1/2 5730): 5060-5090 B.C.
Sample: Carbonized nutshells and wood charcoal
Provenience: 22IT[illegible]0, L. 9-2 (96.45-96.40)
Comments: This sample is part of a second suite of dates (including DIC-2034, 2035) derived from the Early Archaic horizon. Like the first suite, these samples pesumably reflect the translocation of organics from the Middle Archaic horizon at 22IT590. These assays are too recent to be associated with the Early Archaic occupation.

Table 8.4 (cont.)

Lab. No. DIC-2034 Field No. 590-3503

T1/2 5568: 6230±80
T1/2 5730: 6417±80
Calendric date (uncorrected; T1/2 5730): 4467 B.C.
(corrected T1/2 5730): 5180-5240 B.C.
Sample: Carbonized nutshells and wood charcoal
Provenience: 22IT590, L. 10-1 (96.40-96.35)
Comments: The date derived from this sample is too recent (see comments for sample DIC-2033 above).

Lab. No. DIC-2035 Field No. 590-3504

T1/2 5568: 6280±110
T1/2 5730: 6468±110
Calendric date (uncorrected; T1/2 5730): 4518 B.C.
(corrected T1/2 5730): 5250 B.C.
Sample: Carbonized nutshells and wood charcoal
Provenience: 22IT590, L. 10-2 (96.35-96.30)
Comments: The date derived from this sample is too recent (see comments for sample DIC-2033 above).

Lab. No. DIC-2046 Field No. 590-4441

T1/2 5568: Modern
T1/2 5730: Modern
Calendric date (uncorrected; T1/2 5730): Modern
Sample: Solid tree stump segment
Provenience: 22IT590, T.P. 18 (93.93)
Comments: Tree stump segment from underlying terrace deposit. This assay may reflect the presence of recently deposited paludal sediments along the northwestern margins of 22IT590.

Table 8.5. Site 22IT590: Summary of Cultural Feature Data.

Type	Feature Number	Block	Level of Definition	Level of Origin	Length (m)	Width (m)	Depth Thickness (m)	Cultural Affiliation/Comments
				Rock Clusters				
3	5	TP1	?	3?	?	?	0.15	Middle Woodland (Miller I?) disturbed
3	9	A-	6	6	1.01	0.90	0.08	Late Archaic (Benton ?) disturbed
3	25	A-	6	5	2.48	0.68	0.20	Unknown
3	29	D	?	?	0.60	0.66	0.11	Possible Gulf Formational
3	30	A-	9-2	9-2	0.33	0.43	0.09	Unknown
3	45	E	9	9	0.45	0.28	0.07	Late Archaic (Benton ?)
3	54	B	8	8	0.81	1.25	0.11	Late Archaic (Benton ?)
				Bone Clusters				
4	64	A-X	10	?	?	?	0.05	Unknown
				Complex Clusters				
6	39	B	7	5	0.60	[illegible].41	0.11	Gulf Formational (Wheeler ?)

Table 8.5 (cont.)

Type	Feature Number	Block	Level of Definition	Level of Origin	Length (m)	Width (m)	Depth Thickness (m)	Cultural Affiliation/Comments
				Fired (Oxidized) Aggregates				
7b	24	A-X	5	4	0.36	0.84	0.24	Unknown
7c	72	G	9	9	0.49	0.83	0.09	Unknown
				Pits				
9 Hi	6		?	?	0.96	1.30	0.88	Middle Archaic (Eva ?)
9 G	7	TP3	11	10	0.58	0.54	0.10	Unknown
9 Gi	8	J	8	7	1.35	0.39	1.22	Middle Archaic (?)
9 i	12	C	?	?	?	?	0.40	Early Archaic (?)
9 Ei	13	B	13	13	0.27	0.34	0.14	Unknown
9 Gi	14	C	6	6	1.07	0.57	0.45	Unknown
9	15	J	11	11	0.43	0.29	0.25	Unknown
9 G	16	A-	11	10	0.59	0.71	0.88	Unknown
9 Gi	17	A-	12	11	1.20	0.65	0.55	Unknown
9 Gi	18	A-2	12	11	0.30	0.87	0.77	Unknown
9 Hi	26	A-	10-2-A	10-2-A	0.38	1.14	0.23	Early Archaic (?)
9 G	27	D	?	?	1.46	1.10	0.43	Unknown
9 G	28	D	?	?	0.96	1.12	0.24	Unknown
9	31	A-	10-1	?	0.70	0.75	0.04	Unknown
9	32	A-	10	9	0.58	0.58	0.13	Unknown
9	33	A-	10	9	0.31	0.35	0.09	Unknown

Table 8.5. (cont.)

Type	Feature	Block	Level of Definition	Level of Origin	Length (m)	Width (m)	Depth Thickness (m)	Cultural Affiliation/Comments
				Pits, Cont.				
9 Gi	34	A-	10-1	?	0.43	0.70	0.40	Late Archaic (Benton ?)
9 E	35	A-	10-2	?	0.43	0.46	0.17	Unknown
9	36	A-	?	?	0.26	0.55	0.23	Unknown
9 G	37	A-	10	?	0.71	0.65	0.36	Unknown
9 E	38	A-	10	?	0.55	0.55	0.29	Unknown
9 Ei	40	A-	9-1-A	8-2-A	0.48	0.26	0.10	Unknown
9 Gi	41	A-	?	?	0.23	0.74	0.20	Unknown
9	42	F	9-1-D	9-1-D	0.42	0.43	0.12	Unknown
9 G	43	F	10	9	0.91	0.91	0.23	Unknown
9	44	F	10	9	1.27	0.65	0.28	Unknown
9 E	46	E	12	?	0.42	0.35	0.20	Unknown
9 E	47	E	12	?	0.43	0.35	0.19	Unknown
9 Hi	48	E	12	?	0.65	1.45	0.56	Unknown
9 E	49	E	12	?	0.55	0.42	0.16	Unknown
9 C	50	E	12	?	0.35	0.33	0.13	Unknown
9 Fi	51	E	12	?	0.50	0.52	0.31	Unknown
9	52	E	12	?	0.91	0.93	0.25	Unknown
9 Ci	53	E	12	?	0.20	0.40	0.12	Unknown
9 E	55	E	12	?	0.40	0.40	0.13	Unknown

Table 8.5. (cont.)

Type	Feature	Block	Level of Definition	Level of Origin	Length (m)	Width (m)	Depth Thickness (m)	Cultural Affiliation/Comments
				Pits, Cont.				
9 Ei	56	E	13	11?	0.60	0.20	0.09+	Unknown
9 C	57	E	13	?	0.29	0.28	0.15	Unknown
9 Ci	58	E	13	?	0.22	0.29	0.24	Unknown
9 E	59	E	12	?	0.44	0.41	0.08	Unknown
9	60	E	13	?	0.53	0.20	0.26	Unknown
9 Ei	61	E	13	?	0.46	0.34	0.39	Unknown
9 C	62	E	12	11?	0.25	0.32	0.19	Unknown
9 C	63	E	?	?	0.28	0.28	0.14	Unknown
9 Gi	65	H	10	9	0.80	0.33	0.29	Unknown
9	67	H	10	9	0.31	0.28	0.19	Unknown, disturbed
9 E	68	H	10	9	0.36	0.35	0.10	Unknown
9 E	69	H	10	9	0.36	0.31	0.10	Unknown
9 E	70	H	10	9-2	0.34	0.40	0.19	Unknown
9	71	H	10	9	0.20	0.20	0.28	Unknown
9 Gi	73	D	ND	ND	1.20	1.18	0.42	Late Archaic (Benton ?)
9 Fi	74	H	12	7?	0.89	0.48	0.49	Unknown

Table 8.5. (cont.)

Type	Feature	Block	Level of Definition	Level of Origin	Length (m)	Width (m)	Depth Thickness (m)	Cultural Affiliation/Comments
				Prepared Areas				
10 i	22	A-	5-2	4-2	1.95	2.02	0.27	Late Archaic (Benton ?)
10	23	A-	5-2	4-2	1.66	1.50	0.28	Late Archaic (Benton ?)
13 Ai	19	A-	0[b]	0	?	?	0.40	Relic collector disturbance
13 Ai	20	A-	0	0	?	?	?	Relic collector disturbance
13 Ai	21	A-	0	0	0.96	0.46	0.52	Relic collector disturbance

[a] Feature exposed by backhoe; centerpoint location 54.505/186.10W

[b] Level 0 = Surface

i = Incomplete

ND = No Data

Table 8.6. Site 22IT590: Summary of Cultural Material from Fourteen Selected Features.

FEATURE	ARTIFACT	COUNT	WEIGHT
5		35	10674
	UN/BF UNID FRAG	2	0
	NONUTIL FLK 1"	1	19
	NONUTIL FLK .50"	6	16
	NONUTIL FLK .25"	16	7
	UTILIZED FLK .25"	1	1
	COBBLE/PEBBLE	0	1
	FIRE CRK CHRT/CHUNK	0	1
	SANDSTONE FERR	0	10429
	SANDSTONE	0	24
	HEMATITE	0	22
	RESID SAND PLN	1	4
	SALTILLO FABMK	4	127
	ERODED SAND	2	8
	FIBER/OTHER	1	10
	FIRED CLAY	0	2
6		361	2491
	EVA	1	0
	UNID MED FRAG	2	0
	TRIANG BIF BLD OTH	1	0
	BIF BLD MED FRAG	1	0
	PREFORM/IND	2	0
	UF CORE 270	1	0
	UF FLK KNIFE	1	0
	UN/BF UNID FRAG	3	0
	GRND FLK/OTHER	1	0
	NONUTIL FLK 1"	2	83
	NONUTIL FLK .50"	68	189
	UTILIZED FLK .50"	1	3
	NONUTIL FLK .25"	269	135
	NONUTIL/OTHER	5	10
	UTIL BLK/LIKE FLK	3	10
	CONGLOMERATE	0	12
	COBBLE/PEBBLE	0	31
	FIRE CRRK CHRT/CHUNK	0	132
	SANDSTONE FERR	0	1013
	SANDSTONE	0	524
	PETRF WOOD	0	151
	HEMATITE	0	62
	LIMONITE	0	11
	FIRED CLAY	0	125

Table 8.6. Site 22IT590: Summary of Cultural Material from Fourteen Selected Features (continued).

FEATURE	ARTIFACT	COUNT	WEIGHT
8		549	2614
	SYKES/WHITE SPRINGS	1	0
	BIF BLD DISTAL FRAG	1	0
	PREFORM1/IND	1	0
	CORE FRAGMENT	1	0
	MICROLITH	1	0
	UN/BF UNID FRAG	4	0
	NONUTIL FLAK .50"	114	327
	UTILIZED FLAKE	8	23
	NONUTIL FLK .25"	410	166
	UTILIZED FLAKE .25"	4	2
	UTIL CHERT CHUNK	1	1
	NONUTIL/OTHER	3	2
	COBBLE/PEBBLE	0	36
	FIRE CRK CHRT/CHUNK	0	53
	QUARTZITE	0	4
	SANDSTONE FERR	0	1047
	SANDSTONE	0	362
	PETRF WOOD	0	6
	HEMATITE	0	10
	LIMONITE	0	43
	SANDSTONE CONCREATN	0	93
	SILTSTONE	0	1
	FIRED CLAY	0	438
9		4	5090
	BENTON/SHORT	1	0
	NONUTIL FLK .50"	2	12
	NONUTIL FLK .25"	1	1
	COBBLE/PEBBLE	0	3
	FIRE CRK CHRT/CHUNK	0	12
	SANDSTONE FERR	0	5054
	LIMONITE	0	1
	FIRED CLAY	0	7
12		9	7
	NONUTIL FLK .50"	3	5
	NONUTIL FLK .25"	6	2

Table 8.6. Site 22IT590: Summary of Cultural Material from Fourteen Selected Features (continued).

FEATURE	ARTIFACT	COUNT	WEIGHT
22		149	3821
	BIF BLD PROX FRAG	1	0
	CORE FRAGMENT	1	0
	CORE/OTHER	1	0
	DRILL FRAG/DISTAL	1	0
	UN/BF UNID FRAG	3	0
	MORTAR	1	0
	UNID FRAGMENT	1	0
	GRND FLK/OTHER	1	0
	NONUTIL FLK 1."	1	11
	NONUTIL FLK .50"	21	54
	UNITLIZED FLK .50"	2	11
	NONUTIL FLK .25"	113	54
	UTILIZED FLK .25"	2	3
	CHALK	2	
	COBBLE/PEBBLE	0	39
	FIRE CRK CHRT/CHUNK	0	19
	QUARTZITE	0	3
	SANDSTONE FERR	0	2486
	PETRF WOOD	0	1
	HEMATITE	0	7
	LIMONITE	0	1
	SILTSTONE	0	1
	FIRED CLAY	0	1129
23		109	4318
	UNID PROX FRAG	1	0
	CORE FRAGMENT	1	0
	UN/BF UNID FRAG	4	0
	HAMMERSTONE	1	0
	UNID FRAG	2	0
	GRND FLK/OTHER	1	0
	NONUTIL FLK .50"	21	80
	UTILIZED FLK .50"	5	14
	NONUTIL FLK .25"	71	46
	UTILIZED FLK .25"	1	1
	NONUTIL/OTHER	1	1
	COBBLE/PEBBLE	0	41
	FIRE CRK CHRT/CHUNK	0	37
	QUARTZITE	0	3
	SANDSTONE FERR	0	3985
	PETRF WOOD	0	9
	HEMATITE	0	7
	LIMONITE	0	11
	FIRED CLAY	0	83

Table 8.6. Site 22IT590: Summary of Cultural Material from Fourteen Selected Features (continued).

FEATURE	ARTIFACT	COUNT	WEIGHT
26		46	1157
	CORE FRAGMENT	1	0
	UF FLK KNIFE	1	0
	NONUTIL FLK .50"	4	10
	UTILIZED FLK .50"	1	3
	NONUTIL FLK .25"	39	20
	COBBLE/PEBBLE	0	4
	FIRE CRK CHRT/CHUNK	0	1
	SANDSTONE FERR	0	1065
	SANDSTONE	0	2
	PETRF WOOD	0	1
	HEMATITE	0	6
	LIMONITE	0	1
	FIRED CLAY	0	19
29		38	7396
	NONUTIL FLK .50"	3	7
	UTILIZED FLK .50"	1	2
	NONUTIL FLK .25"	27	8
	COBBLE/PEBBLE	0	6
	FIRE CRK CHRT/CHUNK	0	2
	QUARTZITE	0	3
	SANDSTONE FERR	0	7320
	HEMATITE	0	2
	LONG BRANCH FABMK	1	1
	ALEXANDER INCSD	1	2
	SALTILLO FABMK	1	3
	ERODED SAND	3	7
	WHEELER PLAIN	1	21
	SHERDLETS	0	4
	FIRED CLAY	0	6
	DAUB	0	2

Table 8.6. Site 22IT590: Summary of Cultural Material from Fourteen Selected Features (continued).

FEATURE	ARTIFACT	COUNT	WEIGHT
34		117	1003
	BENTON/SHORT	1	0
	UF END/SIDE SCR	1	0
	UN/BF UNID FRAG	3	0
	NONUTIL FLK .50"	14	39
	NONUTIL FLK .25"	92	39
	UTILIZED FLK .25"	2	2
	NONUTIL OTHER	4	4
	COBBLE/PEBBLE	0	8
	FIRE CRK CHRT/CHUNK	0	10
	QUARTZITE	0	2
	SANDSTONE FERR	0	822
	SANDSTONE	0	63
	HEMATITE	0	4
	LIMONITE	0	6
	FIRED CLAY	0	4
39		37	2661
	DRILL FRAG/MED	1	0
	UN/BF UNID FRAG	1	0
	PITTED ANVIL	1	0
	ABRADER	1	0
	UNID FRAG	1	0
	UTILIZED FLK .50"	1	2
	NONUTIL FLK .25"	6	3
	COBBLE/OTHER	0	1
	FIRE CRK CHRT/CHUNK	0	1
	SANDSTONE FERR	0	1058
	SANDSTONE	0	648
	LIMONITE	0	30
	MULBERRY CK PLAIN	1	6
	ERODED SAND	1	3
	WHEELER PLAIN	9	472
	WHEELER PUNCT	5	176
	WHEELER SSTMP	2	61
	ERODED FI	4	105
	FIBER/OTHER	3	74
	SHERDLETS	0	2
	FIRED CLAY	0	19

Table 8.6. Site 22IT590: Summary of Cultural Material from Fourteen Selected Features (continued).

FEATURE	ARTIFACT	COUNT	WEIGHT
45		2	569
	UN/BF UNID FRAG	1	1
	NONUTIL FLK .25"	1	1
	FIRE CHK CHRT/CHUNK	0	1
	SANDSTONE FERR	0	566
54		18	9481
	BENTON/SHORT	1	0
	UF CORE ADJ 180	1	0
	UN/BF UNID FRAG	1	0
	UNID FRAG	1	0
	GRND FLK/OTHER	1	0
	NONUTIL FLK .50"	4	13
	NONUTIL FLK .25"	9	5
	COBBLE/PEBBLE	0	26
	FIRE CRK CHRT/CHUNK	0	3
	SANDSTONE FERR	0	9301
	SANDSTONE	0	3
	HEMATITE	0	8
	LIMONITE	0	31
	SANDSTN CONCREATH	0	78
	FIRED CLAY	0	13
73		173	1245
	BENTON/SHORT	1	0
	UN/UF UNID FRAG	4	0
	UNID FRAG	1	0
	GRND FLK/OTHER	3	0
	NONUTIL FLK 1."	4	63
	NONUTIL FLK .50"	14	60
	NONUTIL FLK .25"	143	58
	UTILIZED FLK .25"	2	4
	UTIL BLK/LIKE FLK	1	2
	COBBLE/PEBBLE	0	22
	FIRE CRK CHRT/CHUNK	0	137
	SANDSTONE FERR	0	653
	SANDSTONE	0	178
	PETRF WOOD	0	34
	HEMATITE	0	13
	LIMONITE	0	3
	MANGANESE MOD	0	4
	SHERDLETS	0	2
	FIRED CLAY	0	12

Table 8.7. Site 22IT590: Prehistoric Ceramics from Block A-2.

	Levels												
Material Class	1	2	3	4	5	6	7	8	9	10	11	12	Total
Miss Plain	9	2	-	-	-	-	-	-	-	-	-	-	11
Eroded Shell	-	4	-	-	-	-	-	-	-	-	-	-	4
Shell-Grog	4	-	1	-	-	-	-	-	-	-	-	-	5
Baytown Plain	7	2	-	-	-	-	-	-	-	-	-	-	9
Mulberry Creek CM	-	1	-	-	-	-	-	-	-	-	-	-	1
Eroded Grog	16	1	1	-	-	-	-	-	-	-	-	-	18
Turkey Paw CM	1	-	-	-	-	-	-	-	-	-	-	-	1
Bone-Other	1	-	-	-	-	-	-	-	-	-	-	-	1
Eroded Bone	1	-	-	-	-	-	-	-	-	-	-	-	1
Mulberry Creek Plain	9	1	1	-	-	-	-	-	-	-	-	-	11
Flint River CM	3	-	-	-	1	-	-	-	-	-	-	-	4
Long Branch Fabmk	4	-	-	-	-	-	-	-	-	-	-	-	4
Eroded Limestone	26	24	6	-	1	1	-	-	-	-	-	-	58
Furrs CM	3	1	-	3	-	-	-	-	-	-	-	-	7
Saltillo Fabmk	75	24	14	-	-	-	-	1	-	-	-	-	114
Smithsonia Zone	-	1	-	-	-	-	-	-	-	-	-	-	1
Alexander Incsd	41	30	20	3	4	-	-	-	-	-	-	-	98
Alexander Pinch	34	21	7	2	-	1	-	1	-	-	-	-	66
Alex Incsd-Pinch	6	3	1	-	-	-	-	-	-	-	-	-	10
Alex Incsd-Punct	6	8	2	-	-	-	-	-	-	-	-	-	16
Columbus Punct	5	3	-	-	-	-	-	-	-	-	-	-	8
Residual Sand Plain	96	26	13	4	4	1	-	-	-	-	-	-	144
Eroded Sand	269	121	34	1	2	4	2	-	-	-	-	-	433
Wheeler Plain	38	12	31	15	-	-	-	-	-	-	-	-	96
Wheeler Denstmp	6	9	9	6	1	-	-	-	-	-	-	-	31
Wheeler Sstmp	1	-	2	2	-	-	-	-	-	-	-	-	5
Wheeler Punct	3	4	6	3	-	-	-	-	-	-	-	-	16
Fiber-Other	-	-	2	-	-	-	-	-	-	-	-	-	2
Eroded Fiber	37	45	55	12	4	1	-	-	-	-	-	-	154
Total	706	344	206	51	17	8	2	2	-	-	-	-	1336

Table 8.8. Site 22IT590: Prehistoric Ceramics from Block B.

	Levels												
Material Class	1	2	3	4	5	6	7	8	9	10	11	12	Total
Miss Plain	13	-	-	-	-	-	-	-	-	-	-	-	13
Eroded Shell	-	-	-	-	1	-	-	-	-	-	-	-	1
Shell-Grog	1	-	-	-	-	-	-	-	-	-	-	-	1
Baytown Plain	3	-	-	1	-	-	-	-	-	-	-	-	4
Withers Fabmk	2	-	-	-	-	-	-	-	-	-	-	-	2
Eroded Grog	1	3	-	1	-	-	-	-	-	-	-	-	5
Mulberry Creek Plain	5	2	2	-	-	-	-	-	-	-	-	-	9
Eroded Limestone	3	4	3	-	-	-	-	3	-	-	-	-	13
Furrs CM	2	1	-	1	-	-	-	-	-	-	-	-	4
Saltillo Fabmk	6	-	5	2	-	-	-	-	-	-	-	-	13
Smithsonia Zone	-	-	-	1	-	-	-	-	-	-	-	-	1
Alexander Incsd	3	4	4	2	-	-	-	-	-	-	-	-	13
Alexander Pinch	2	6	7	-	-	-	-	-	-	-	-	-	15
Alex Incsd-Pinch	-	3	-	-	-	-	-	-	-	-	-	-	3
Alex Incsd-Punct	1	-	-	-	-	-	-	-	-	-	-	-	1
Residual Sand Plain	20	1	12	4	1	-	-	-	-	-	-	-	38
Sand-Other	1	1	-	-	-	-	-	-	-	-	-	-	2
Eroded Sand	65	71	14	1	4	-	-	-	-	-	-	-	155
Wheeler Plain	13	2	9	-	-	-	-	-	-	-	-	-	24
Wheeler Denstmp	3	10	16	7	-	-	1	-	-	-	-	-	37
Wheeler Sstmp	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheeler Punct	1	1	5	4	-	-	-	-	-	-	-	-	11
Fiber-Other	-	-	-	1	1	-	-	1	-	-	-	-	3
Eroded Fiber	9	41	23	26	9	-	-	-	-	-	-	-	108
Total	154	150	100	51	16	-	1	4	-	-	-	-	476

Table 8.9. Site 22IT590: Prehistoric Ceramics from Block C.

Material Class	Levels 1	2	3	4	5	6	7	8	9	10	11	12	Total
Miss Plain	7	-	1	-	-	-	-	1	-	-	-	-	9
Eroded Shell	17	2	-	-	-	-	-	-	-	-	-	-	19
Shell-Grog	5	-	-	-	-	-	-	-	-	-	-	-	5
Baytown Plain	11	2	6	-	-	-	-	-	-	-	-	-	19
Cormorant Cimp	-	-	1	-	-	-	-	-	-	-	-	-	1
Mulberry Creek CM	5	1	1	-	-	-	-	-	-	-	-	-	7
Alligator Incsd	-	2	-	-	-	-	-	-	-	-	-	-	2
Eroded Grog	21	3	2	3	1	-	-	-	-	-	-	-	30
Turkey Paw Plain	3	1	-	-	-	-	-	-	-	-	-	-	4
Turkey Paw CM	1	-	1	-	-	-	-	-	-	-	-	-	2
Eroded Bone	2	3	-	-	-	-	-	-	-	-	-	-	5
Mulberry Creek Plain	15	-	1	-	-	-	-	-	-	-	-	-	16
Long Branch Fabmk	-	2	2	-	1	-	-	-	-	-	-	-	5
Eroded Limestone	5	8	4	1	-	-	-	-	-	-	-	-	18
Furrs CM	7	1	-	-	-	-	1	-	-	-	-	-	9
Saltillo Fabmk	13	21	9	3	-	2	-	-	-	-	-	-	48
Alexander Incsd	10	5	3	1	1	-	-	1	-	-	-	-	21
Alexander Pinch	13	2	-	-	-	-	-	-	-	-	-	-	15
Alex Incsd-Pinch	-	1	-	-	-	-	-	-	-	-	-	-	1
Alex Incsd-Punct	1	-	-	-	-	-	-	-	-	-	-	-	1
Columbus Punct	-	-	-	1	-	-	-	-	-	-	-	-	1
Residual Sand Plain	29	17	13	5	2	-	-	-	-	-	-	-	66
Sand-Other	1	1	-	-	-	-	-	-	-	-	-	-	2
Eroded Sand	190	92	36	24	1	-	-	-	-	-	-	-	343
Wheeler Plain	-	1	4	-	-	-	-	-	-	-	-	-	5
Wheeler Punct	-	2	1	-	-	-	-	-	-	-	-	-	3
Fiber-Other	-	2	-	-	-	-	-	-	-	-	-	-	2
Eroded Fiber	15	13	3	9	-	-	-	-	-	-	-	-	40
Total	371	182	88	47	6	2	1	2	-	-	-	-	699

Table 8.10. Site 22IT590: Summary of Chipped and Ground Stone Artifact Categories.

Category	Number
Projectile Point/Knives	
Beaver Lake	1
Benton	58
Big Sandy	6
Cotaco Creek	10
Cypress Creek	11
Dalton	5
Eva	11
Gary	9
Greenbrier	21
Hardaway	1
Kirk Corner-Notched	31
Late Woodland/Mississippi Small Triangular	22
Ledbetter Pickwick	16
Little Bear Creek/Flint Creek	86
McIntire	11
Morrow Mountain	9
Residual Stemmed	94
Sykes-White Springs	20
Tombigbee Stemmed	4
Vaughn	2
Unidentified PP/K Distal Fragment	276
Unidentified PP/K Medial Fragment	170
Unidentified PP/K Proximal Fragment	168
Unfinished Small Triangulr PP/K	3
Residual Triangular	9
Plevna	4
Beachum	9
TOTAL (Subtotal PP/Ks identified = 453)	1067

Bifaces

Ovoid Biface Blade--Flake	5
Ovoid Biface Blade--Other	13
Triangular Biface Blade--Flake	15
Triangular Biface Blade--Other	52
Narrow Triangular Biface Blade--Other	1
Expanding Triangular Biface Blade--Flake	1
Broad Based Triangular Biface Blade--Other	2
Biface Blade Proximal Fragment	32
Biface Blade Medial Fragmant	34
Biface Blade Distal Fragment	72
Biface Other	6
Rehafted Biface Fragment (recycled)	2
Subtotal	236

Preforms

Preform 1 - Cobble	21
Preform 1 - Flake	70
Preform 1 - Indeterminate	131
Preform 2 - Cobble	2
Preform 2 - Flake	77
Preform 2 - Indeterminate	157
Subtotal	458

Cores

90° - Unifacial	17
180° - Unifacial Opposing	4
180° - Bifacial Opposing	1
180° - Unifacial Adjacent	24
180° - Bifacial Adjacent	5
270° - Unifacial	1
270° - Bifacial	9
360° - Unifacial	3
360° - Bifacial	3
Bipolar Core	4
Microblade Core	1
Core Fragment	140
Core Other	25
Subtotal	237

Scrapers

Uniface side scraper on blade/blade-like flake	6
Uniface end scraper on blade/blade-like flake	2
Uniface side-end scraper on blade/blade-like flake	2
Uniface side scraper on exanding flake	13
Uniface end scraper on exapnding flake	27
Uniface side-end scraper on expanding flake	17
Uniface side scraper on other flake	51
Uniface end scraper on other flake	43
Uniface side-end scraper on other flake	19
Uniface end scraper on thermal spall	3
Uniface side scraper on thermal spall	2
Uniface cobble scraper	2
Biface cobble scraper	1
Scraper on a biface fragment (recycled)	21
Scraper on a core	3
Notched flake/spokeshave	36
Unidentifiable scraper fragment	47
Scraper Other	5
Ovoid biface scraper	1
Biface scraper on flake	2
Graver/scraper	2
Uniface hafted end scraper	2
Notched flake/spokeshave (recycled)	3
Hafted end scraper (recycled)	5
Subtotal	315

Drills, Perforators, Etc.

Shaft drill	7
Expanding base drill	30
Stemmed drill (recycled)	1
Drill fragment - distal	39
Drill fragment - medial	17
Reamer	5
Perforator	24
Graver	18
Microlith	26
Denticulate	1
Microperforator	2
Reamer (recycled)	2
Perforator (recycled)	2
Subtotal	191

Other Uniface and Biface Tools

Uniface chopper	11
Biface chopper	24
Uniface adze	2
Biface adze	9
Uniface flake knife	47
Biface flake knive	38
Uniface cobble knife	3
Biface digging implement	2
Unidentifiable chipped stone fragment	2356
Other	6
Wedge	7
Chopper/hammerstone	4
Chisel	18
Burinated biface (recycled)	2
Adze/chisel	6
Biface flake knife/spokeshave	1
Biface knife on thermal spall	2
Piece Esquille	6
Piece Esquille on biface (recycled)	1
Subtotal	2545

Ground Stone Tools

Hammerstone	47
Anvilstone	8
Pitted anvilstone	13
Hammer/anvilstone	12
Abrader	9
Muller	12
Mortar	3
Pestle	1
Grooved Axe	1
Gorget	1
Atlatl weight	6
Bead	1
Hoe chip	1
Steatite sherd	4
Ground limonite	17
Ground hematite	28
Edge ground cobble	1
Unidentifiable ground/polished stone fragment	295
Other (Ground flake)	118
Muller/pitted anvilstone	3
Drill core	1
Bead preform	1
Abrader/anvilstone	1
Awl	6
Subtotal	580

Table 8.11. Site 22IT590: Frequency of Projectile Point/Knives by Raw Material Type.

	Bangor, Bl.-Gr.	Bangor, Fossil.	Camden, Heated	Camden, Unheated	Ft. Payne	Ft. Payne Fossil	Oolitic	Pickwick	Quartz	Quartzite, Talht.	Unid.	TOTAL
Beachum			5	1	2						1	9
Beaver Lake			1									1
Benton			23		33	2						58
Big Sandy			5	1								6
Cataco Creek			8	2								10
Cypress Creek			9	1		1						11
Dalton			3		2							5
Eva		1	8				1				1	11
Flint Creek			29	2	1			1			1	34
Gary			7		2							9
Greenbrier	1		13		7							21
Hardaway			1									1
Kirk Corner Notched		2	18	1	7	2					1	31
Late Woodland/ Mississippian Triangular			19	1	1						1	22
Ledbetter/Pickwick			11		2			2			1	16
Little Bear Creek			34	3	7	1					1	46
McIntire			10	1								11
Morrow Mountain			3		5						1	9
Mud Creek			5		1							6
Plevna			4									4
Residual Stemmed		1	65	4	15	2			1	3	3	94
Residual Triangular			6		3							9
Sykes/White Springs			9	2	6			1			2	20
Tombigbee Stemmed			3		1							4
Unfinished Small Triangular			3									3
Vaughn			1							1		2
N	1	4	303	19	95	8	1	4	1	4	13	453
%	0.22	0.88	66.89	4.19	20.97	1.77	0.22	0.88	0.22	0.88	2.87	100%

Table 8.12. Site 22IT590: Projectile Point/Knife Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Beaver Lake				
WEIGHT	0	1	-	-	-	-	-	-
LENGTH	0	1	-	-	-	-	-	-
WIDTH	0	1	-	-	-	-	-	-
THK	0	1	-	-	-	-	-	-
BASLW	1	0	29.4	-	29.4	29.4	0	-
SHOULDRW	0	1	-	-	-	-	-	-
JUNCW	1	0	25.6	-	25.6	25.6	0	-
HAFTL	1	0	13.3	-	13.3	13.3	0	-
				Beachum				
WEIGHT	2	7	9.0	1.8	7.7	10.3	2.6	3.4
LENGTH	2	7	40.9	5.9	36.7	45.0	8.3	34.5
WIDTH	6	3	30.8	2.0	28.1	33.8	5.7	4.0
THK	5	4	8.4	1.3	6.6	9.9	3.3	1.7
BASLW	4	5	21.6	1.5	20.3	23.0	2.7	2.1
SHOULDRW	8	1	29.4	2.3	26.3	33.2	6.9	5.1
JUNCW	9	0	21.5	1.8	18.6	24.5	5.9	3.1
HAFTL	4	5	7.9	0.6	7.5	8.8	1.3	0.4
				Benton Short Stemmed				
WEIGHT	15	43	14.8	4.5	6.9	21.1	14.2	20.3
LENGTH	17	41	58.2	12.9	37.7	81.9	44.2	166.1
WIDTH	35	23	31.0	4.6	22.8	43.7	20.9	21.2
THK	26	32	8.4	1.6	5.9	11.8	5.9	2.6
BASLW	45	13	22.9	2.3	16.2	28.8	12.6	5.2
SHOULDRW	47	11	29.5	4.7	9.5	42.5	33.0	22.4
JUNCW	52	6	23.0	2.8	15.6	31.8	16.2	7.7
HAFTL	42	16	8.7	1.5	5.0	11.9	6.9	2.3
				Big Sandy				
WEIGHT	2	4	7.3	3.0	5.2	9.4	4.2	8.8
LENGTH	2	4	39.9	3.8	37.2	42.5	5.3	14.1
WIDTH	5	1	27.0	3.3	23.1	30.4	7.3	10.6
THK	6	0	7.6	1.4	6.0	9.6	3.6	2.0
BASLW	4	2	25.2	3.7	21.4	28.4	7.0	13.7
SHOULDRW	4	2	26.9	3.4	22.0	29.5	7.5	11.3
JUNCW	6	0	18.4	4.0	13.1	22.9	9.8	16.2
HAFTL	4	2	12.2	2.8	8.3	15.1	6.8	8.1

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
			Cotaco Creek					
WEIGHT	2	8	10.6	0.6	10.2	11.0	0.8	0.3
LENGTH	2	8	50.5	1.3	49.6	51.4	1.8	1.6
WIDTH	8	2	32.1	3.2	28.7	37.9	9.2	9.9
THK	5	5	8.1	0.9	6.7	9.0	2.3	0.8
BASLW	9	1	12.1	1.8	9.2	14.4	5.2	3.1
SHOULDRW	9	1	30.3	3.5	26.3	36.1	9.8	12.2
JUNCW	10	0	14.1	1.4	12.1	16.5	4.4	2.0
HAFTL	9	1	11.2	1.6	9.8	13.6	3.8	2.4
			Cypress Creek					
WEIGHT	1	10	20.9	-	20.9	20.9	0	-
LENGTH	2	9	51.4	5.0	47.8	54.9	7.1	25.2
WIDTH	3	8	37.3	3.8	34.6	42.0	7.4	14.7
THK	3	8	9.2	0.3	8.9	9.4	0.5	0.1
BASLW	8	3	20.4	3.3	15.4	26.2	10.8	10.7
SHOULDRW	3	8	36.4	3.4	34.3	40.3	6.0	11.3
JUNCW	9	2	20.2	2.8	17.1	26.2	9.1	7.7
HAFTL	8	3	9.0	2.3	5.2	11.4	6.2	5.4
			Dalton					
WEIGHT	1	4	7.9	-	7.9	7.9	0	-
LENGTH	1	4	46.0	-	46.0	46.0	0	-
WIDTH	3	2	27.5	3.0	24.7	30.7	6.0	9.2
THK	3	2	8.6	1.5	7.4	10.3	2.9	2.3
BASLW	2	3	24.7	1.1	23.9	25.4	1.5	1.1
SHOULDRW	2	3	26.2	3.3	23.8	28.5	4.7	11.1
JUNCW	2	3	23.9	6.6	19.2	28.5	9.3	43.3
HAFTL	2	3	16.2	3.8	13.5	18.9	5.4	14.6
			Eva					
WEIGHT	4	7	11.0	3.2	7.8	15.3	7.5	10.1
LENGTH	4	7	50.4	12.2	42.5	68.4	25.9	149.4
WIDTH	8	3	32.0	3.2	27.0	36.1	9.1	10.1
THK	8	3	9.3	0.9	8.0	10.6	2.6	0.7
BASLW	6	5	15.0	2.4	12.6	18.8	6.2	5.5
SHOULDRW	8	3	31.2	3.1	26.3	35.9	9.6	9.7
JUNCW	6	5	15.9	2.1	12.6	18.8	6.2	4.5
HAFTL	5	6	6.9	5.5	2.9	16.3	13.4	30.3

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Flint Creek				
WEIGHT	10	29	11.7	4.7	5.5	17.7	12.2	22.1
LENGTH	13	26	56.2	10.2	40.7	71.7	31.0	103.6
WIDTH	29	18	25.1	3.6	19.8	34.0	14.2	12.7
THK	25	14	10.3	1.9	6.4	14.1	7.7	3.6
BASLW	27	12	15.7	2.4	9.8	20.8	11.0	5.8
SHOULDRW	31	8	24.3	3.2	19.3	32.2	12.9	10.4
JUNCW	32	7	15.2	1.8	10.7	18.5	7.8	3.3
HAFTL	26	13	12.1	1.6	9.5	14.9	5.4	2.5
				Gary				
WEIGHT	1	8	4.4	-	4.4	4.4	0	-
LENGTH	2	7	46.4	16.2	34.9	57.8	22.9	262.2
WIDTH	5	4	25.5	11.1	8.9	36.4	27.5	124.0
THK	4	5	8.8	1.1	7.5	10.1	2.6	1.3
BASLW	7	3	10.7	3.8	4.7	17.3	12.6	14.5
SHOULDRW	6	3	27.5	4.1	19.9	31.8	11.9	16.8
JUNCW	8	1	16.6	1.8	13.9	19.3	5.4	3.3
HAFTL	7	2	12.3	1.6	9.3	14.5	5.2	2.5
				Greenbriar				
WEOGHT	3	18	9.1	2.6	7.2	12.0	4.8	6.6
LENGTH	3	18	54.6	4.2	51.5	59.4	7.9	17.6
WIDTH	6	15	27.9	4.2	22.6	33.3	10.7	17.5
THK	6	15	7.0	0.9	5.9	8.0	2.1	0.9
BASLW	19	2	25.6	3.8	20.1	33.8	13.7	14.6
SHOULDRW	8	13	26.0	3.2	21.6	29.5	7.9	10.5
JUNCW	18	3	22.2	4.0	16.7	30.0	13.3	15.8
HAFTL	17	4	11.3	2.7	7.5	16.6	9.1	7.2
				Hardaway				
WEIGHT	0	1	-	-	-	-	-	-
LENGTH	0	1	-	-	-	-	-	-
WIDTH	1	0	30.2	-	30.2	30.2	0	-
THK	1	0	8.5	-	8.5	8.5	0	-
BASLW	1	0	30.1	-	30.1	30.1	0	-
SHOULDRW	1	0	27.5	-	27.5	27.5	0	-
JUNCW	1	0	21.1	-	21.1	21.1	0	-
HAFTL	1	0	12.3	-	12.3	12.3	0	-

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Kirk Corner Notched								
WEIGHT	13	18	9.5	4.8	3.2	17.2	14.0	22.8
LENGTH	16	25	51.1	8.8	34.5	63.3	28.8	77.5
WIDTH	19	12	29.4	4.2	22.9	38.8	15.9	17.5
THK	23	8	7.4	1.1	4.8	10.0	5.2	1.2
BASLW	25	6	23.4	4.4	15.7	33.8	18.1	19.2
SHOULDRW	21	10	29.3	4.2	21.6	38.6	17.0	17.8
JUNCW	31	0	19.1	3.3	11.9	28.3	16.4	10.6
HAFTL	26	5	8.6	2.1	5.3	13.0	7.7	4.3
Ledbetter/Pickwick								
WEIGHT	1	15	23.0	-	23.0	23.0	0	-
LENGTH	2	14	69.1	8.3	63.2	75.0	11.8	69.6
WIDTH	6	10	37.0	6.2	30.8	47.6	16.8	38.2
THK	9	7	10.2	1.4	8.7	12.4	3.7	2.0
BASLW	16	0	15.6	2.1	10.6	18.7	8.1	4.4
SHOULDRW	10	6	34.8	5.3	27.2	47.6	20.4	27.8
JUNCW	15	1	18.2	3.0	14.1	25.0	10.9	8.8
HAFTL	15	1	12.3	1.9	8.1	16.3	8.2	3.5
Little Bear Creek								
WEIGHT	9	38	8.8	3.3	5.5	14.3	8.8	10.9
LENGTH	9	38	54.2	10.1	37.7	71.4	33.7	101.4
WIDTH	31	16	25.4	4.1	19.7	34.9	15.2	16.9
THK	27	20	9.7	2.2	6.2	13.5	7.3	4.9
BASLW	37	10	13.3	3.1	7.0	22.8	15.8	9.9
SHOUDLRW	38	9	24.7	4.0	18.4	33.0	14.6	16.1
JUNCW	45	2	15.1	2.1	11.3	19.8	8.5	4.5
HAFTL	38	9	12.3	1.8	7.9	15.9	8.0	3.1
McIntire								
WEIGHT	5	6	16.7	3.0	13.8	21.2	7.4	9.2
LENGTH	5	6	57.7	6.7	47.8	65.0	17.2	45.2
WIDTH	10	1	34.2	2.6	30.3	37.3	7.0	7.0
THK	9	2	9.9	1.3	8.4	12.8	4.4	1.8
BASLW	11	0	21.0	2.0	16.7	23.7	7.0	4.0
SHOULDRW	10	1	33.5	2.8	29.6	36.9	7.3	7.6
JUNCW	11	0	21.1	2.7	18.1	28.3	10.2	7.2
HAFTL	11	0	10.2	2.0	7.6	15.4	7.8	4.0

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Late Woodland/Mississippian Triangular								
WEIGHT	9	13	0.9	0.2	0.6	1.2	0.6	0.0
LENGTH	8	14	22.3	4.9	11.5	27.8	16.3	24.0
WIDTH	18	4	16.3	3.4	9.6	21.4	11.8	11.4
THK	21	1	4.7	2.4	2.9	14.8	11.9	5.9
BASLW	18	4	16.1	3.3	9.6	20.6	11.0	11.0
SHOULDRW	0	22	-	-	-	-	-	-
JUNCW	0	22	-	-	-	-	-	-
HAFTL	0	22	-	-	-	-	-	-
Morrow Mountain								
WEIGHT	2	7	8.5	1.1	7.7	9.3	1.6	1.3
LENGTH	3	6	51.6	6.8	46.8	59.4	12.6	46.1
WIDTH	5	4	28.6	4.2	25.1	34.2	9.1	17.3
THK	8	1	8.1	4.5	5.6	10.9	5.3	2.9
BASLW	6	3	15.9	4.5	10.5	22.8	12.3	19.9
SHOULDRW	5	4	27.6	4.4	23.4	33.1	9.7	19.4
JUNCW	7	1	17.7	3.0	12.6	22.8	10.2	9.1
HAFTL	4	5	10.0	3.7	5.6	14.1	8.5	14.0
Residual Stemmed								
WEIGHT	11	83	10.2	3.5	4.0	15.0	11.0	12.1
LENGTH	13	81	47.4	10.6	33.3	77.1	43.8	112.7
WIDTH	45	49	27.7	4.2	19.8	36.6	16.8	18.0
THK	39	55	8.8	1.8	6.6	13.5	6.9	3.1
BASLW	58	28	16.8	4.8	4.3	34.8	30.5	22.9
SHOULDRW	50	44	27.2	5.4	9.0	43.3	34.3	28.6
JUNCW	71	23	18.7	3.5	12.3	35.0	22.7	12.3
HAFTL	47	47	10.0	2.9	4.0	18.7	14.7	8.3
Residual Triangular								
WEIGHT	5	4	8.4	1.4	6.3	10.0	3.7	2.1
LENGTH	6	3	44.7	7.2	37.9	54.0	16.1	51.1
WIDTH	8	1	29.4	12.5	20.8	59.1	38.3	155.1
THK	7	2	7.9	0.9	6.5	9.1	2.6	0.8
BASLW	7	2	23.3	3.7	19.5	31.1	11.6	14.0
SHOUDLRW	0	9	-	-	-	-	-	-
JUNCW	0	9	-	-	-	-	-	-
HAFTL	0	9	-	-	-	-	-	-

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
			Small Unfinished Triangular					
WEIGHT	1	2	3.8	-	3.8	3.8	0	-
LENGTH	1	2	26.5	-	26.5	26.5	0	-
WIDTH	2	1	20.0	1.6	18.9	21.1	2.2	2.4
THK	1	2	8.0	-	8.0	8.0	0	-
BASLW	2	1	18.4	0.7	17.9	18.9	1.0	0.5
SHOULDRW	0	3	-	-	-	-	-	-
JUNCW	0	3	-	-	-	-	-	-
HAFTL	0	3	-	-	-	-	-	-
			Sykes/White Springs					
WEIGHT	7	13	10.0	2.5	6.5	13.0	6.5	6.0
LENGTH	8	12	48.0	7.0	35.9	56.8	20.9	48.9
WIDTH	15	5	28.9	2.4	25.2	32.7	7.5	5.7
THK	13	1	8.0	1.4	6.1	11.1	5.0	2.0
BASLW	15	5	20.8	4.1	15.0	30.3	15.3	16.6
SHOULDRW	17	3	28.3	2.3	24.8	31.9	7.1	5.1
JUNCW	20	0	21.1	2.6	16.7	28.2	11.5	6.8
HAFTL	15	5	7.2	1.5	4.5	9.9	5.4	2.3
			Tombigbee Stemmed					
WEIGHT	3	1	8.0	1.3	6.7	9.2	2.5	1.6
LENGTH	3	1	46.2	2.6	40.6	45.7	5.1	6.5
WIDTH	4	0	23.8	2.4	20.8	26.1	5.3	5.7
THK	3	1	8.2	1.0	7.0	9.0	2.0	1.1
BASLW	4	0	10.3	1.4	8.5	11.6	3.1	1.9
SHOULDRW	4	0	23.2	2.2	20.1	25.1	5.0	4.9
JUNCW	4	0	14.7	2.0	12.4	16.6	4.2	4.0
HAFTL	4	0	11.2	1.3	9.4	12.5	3.1	1.7
			Vaughn					
WEIGHT	0	2	-	-	-	-	-	-
LENGTH	1	1	35.6	-	35.6	35.6	0	-
WIDTH	2	0	32.6	1.2	31.7	33.4	1.7	1.5
THK	2	0	9.7	1.6	8.5	10.8	2.3	2.7
BASLW	0	2	-	-	-	-	-	-
SHOULDRW	2	0	31.8	0.7	31.3	32.3	1.0	0.5
JUNCW	2	0	22.8	0.6	22.3	23.2	0.9	0.4
HAFTL	0	2	-	-	-	-	-	-

Table 8.13. Site 22IT590: Metric Data for Benton Variants.

Variant	Weight		Length		Width		Thickness		B. Width		S. Width		J. Width		H.E. Length	
	g	n	mm	n	mm	n	mm	n	mm	n	mm	n	mm	n	mm	n
A	21	1	77	1	30	3	8	4	24	4	29	6	24	6	6	3
B	13	3	65	3	29	5	7	4	21	7	29	7	22	7	9	7
C	17	3	63	3	-ND--		9	5	22	12	27	12	23	13	9	11
D	14	4	56	5	30	8	9	7	23	9	29	10	23	9	10	7
E	14	4	51	6	29	8	8	7	24	12	29	9	22	13	8	12
F	--ND--		--ND--		43	3	----ND---		27	2	41	3	30	3	10	2

NOTE: B. Width = Basal Width; S. Width = Shoulder Width; J. Width = Juncture Width; H.E. Length = Haft Element Length; ND = No Data.

Table 8.14. Site 22IT590: Metric Data for Eva Variants.

Variant	Weight		Length		Width		Thickness		B. Width		S. Width		J. Width		H.E. Length	
	g	n	mm	n	mm	n	mm	n	mm	n	mm	n	mm	n	mm	n
A	11	1	48	1	35	3	10	2	14	2	34	3	16	2	12	2
B	11	3	51	3	30	5	9	6	16	4	30	5	16	4	4	3

NOTE: B. Width = Basal Width; S. Width = Shoulder Width; J. Width = Juncture Width; H.E. Length = Haft Element Length.

Table 8.15. Site 22IT590: Metric Data for Greenbriar Variants.

Variant	Weight		Length		Width		Thickness		B. Width		S. Width		J. Width		H.E. Length	
	g	*n*	*mm*	*n*	*mm*	*n*	*mm*	*n*	*mm*	*n*	*mm*	*n*	*mm*	*n*	*mm*	*n*
Small	7	1	52	1	23	2	6	2	24	10	22	3	19	7	10	7
Medium	10	2	56	2	--ND-		7	3	29	5	28	4	24	6	12	6
Misc.	--ND--		--ND--		30	1	8	1	27	4	29	1	26	5	11	4

NOTE: B. Width = Basal Width; S. Width = Shoulder Width; J. Width = Juncture Width; H.E. Length = Haft Element Length; ND = No Data.

Table 8.16. Site 22IT590: Metric Data for Kirk Variants.

Variant	Weight		Length		Width		Thickness		B. Width		S. Width		J. Width		H.E. Length	
	g	n	mm	n	mm	n	mm	n	mm	n	mm	n	mm	n	mm	n
A	6	6	46	8	27	8	7	11	21	11	27	8	17	12	7	12
A2	11	3	55	4	--ND-		8	4	24	6	29	3	19	7	11	6
B	14	2	61	2	30	5	8	4	25	4	29	5	20	8	10	4
C	13	1	48	1	32	2	9	2	24	2	32	3	22	3	9	2

NOTE: B. Width = Basal Width; S. Width = Shoulder Width; J. Width = Juncture Width; H.E. Length = Haft Element Length; ND = No Data.

Table 8.17. Site 22IT590: Metric Data for Little Bear Creek and Flint Creek Variants.

Variant	Weight		Length		Width		Thickness		B. Width		S. Width		J. Width		H.E. Length	
	g	n	mm	n	mm	n	mm	n	mm	n	mm	n	mm	n	mm	n
A	6	6	48	6	23	14	8	11	11	14	23	14	14	15	12	14
B	11	2	55	3	26	12	10	7	14	16	26	15	16	18	12	16
C	7	4	49	4	-ND--		8	6	14	7	23	7	12	7	11	7
D	17	3	64	4	26	8	12	11	16	9	25	10	15	13	13	10
E	14	3	62	5	28	10	11	10	17	11	27	13	16	13	13	10
F	11	2	51	1	22	6	10	5	14	4	21	6	15	6	11	4
G	13	1	53	1	-ND--		9	5	17	8	22	7	15	10	13	8

NOTE: B. Width = Basal Width; S. Width = Shoulder Width; J. Width = Juncture Width; H.E. Length = Haft Element Length; ND = No Data.

Table 8.18. Site 22IT590: Frequency of Bifaces by Raw Material Type.

Category	Bangor, Fossil.	Bangor, Little Mountain	Camden, Heated	Camden Unheated	Ft. Payne	Ft. Payne Fossil.	Pickwick	Tusca., Heated	Unid.	TOTAL
Ovoid Biface Blade-Flake	1		2	1			1			5
Ovoid Biface Blade-Other			8	1			2		2	13
Triangular Biface Blade-Flake			12	1						13
Triangular Biface Blade-Other		1	37	5	8	1	1			53
Narrow Triangular Biface Blade-Other			1	1						2
Expanding Triangular Biface Blade-Flake					1					1
Expanding Triangular Biface Blade-Other			1							1
Broad Based Biface Blade-Other			2							2
Biface Blade Fragment			106	6	15	2	4	1	2	136
Biface-Other			7						1	8
Rehafted Biface Fragment			1		1					2
N	1	1	177	15	25	3	8	1	5	236
%	0.42	0.42	75.00	6.36	10.59	1.27	3.39	0.42	2.12	100%

Table 8.19. Biface Blade Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
			Ovoid Biface Blade on a Flake					
WEIGHT	3	0	27.5	6.9	19.6	32.2	12.6	47.7
LENGTH	3	0	54.9	6.7	47.4	60.4	13.0	45.3
WIDTH	3	0	36.3	4.6	31.0	39.2	8.2	20.9
THK	3	0	13.4	2.1	11.2	15.3	4.1	4.3
			Ovoid Biface Blade on Other					
WEIGHT	8	0	22.4	7.5	8.4	34.0	25.6	56.7
LENGTH	8	0	58.2	14.8	39.5	88.1	48.6	218.1
WIDTH	8	0	37.3	7.5	23.6	48.7	25.1	56.9
THK	8	0	10.6	1.7	7.9	13.3	5.4	2.8
			Triangular Biface Blade on Flake					
WEIGHT	7	2	18.4	6.6	10.9	29.2	18.3	43.6
LENGTH	7	2	60.4	12.4	51.7	87.6	35.9	154.6
WIDTH	8	1	32.9	6.1	24.4	42.9	18.5	37.7
THK	9	0	9.4	1.6	7.9	12.7	4.8	2.5
			Triangular Biface Blade on Other					
WEIGHT	15	18	18.7	6.3	7.4	32.5	25.1	39.9
LENGTH	18	15	60.1	10.2	37.1	83.3	46.2	103.6
WIDTH	29	4	34.7	8.7	23.4	72.8	49.4	76.5
THK	27	6	11.0	2.6	7.0	17.0	10.0	6.9
			Narrow Triangular Blade on Other					
WEIGHT	1	1	11.1	-	11.1	11.1	0	-
LENGTH	1	1	55.1	-	55.1	55.1	0	-
WIDTH	2	0	22.4	0.4	22.2	22.7	0.5	0.1
THK	2	0	10.4	1.6	9.3	11.5	2.2	2.4
			Broad Based Biface Blade on Other					
WEIGHT	2	0	16.0	4.3	13.0	19.1	6.1	18.6
LENGTH	2	0	55.4	4.8	52.0	58.8	6.8	23.1
WIDTH	2	0	36.0	4.9	32.6	39.5	6.9	23.8
THK	2	0	9.1	0.4	8.8	9.4	0.6	0.2
BASLW	2	0	35.4	5.2	31.8	39.1	7.3	26.6

Table 8.20. Site 22IT590: Frequency of Preforms by Raw Material Type.

Category	Camden, Heated	Camden, Unheated	Ft. Payne	Pickwick	Conglomerate	Unidentified	Total
Preform I--Cobble	14(70.00)	6(30.00)					20
Preform I--Flake	54(77.14)	14(20.00)		2 (2.86)			70
Preform I--Indeterminate	113(86.92)	14(10.77)		1 (0.77)	1 (0.77)	1(0.77)	130
Preform II--Cobble	2(100.00)						2
Preform II--Flake	66(83.54)	8(10.13)	3(3.80)	1(1.265)		1(1.265)	79
Preform II--Indeterminate	136(87.18)	11(7.05)	2(1.28)	6 (3.85)		1(0.64)	156
Total n	335	53	5	10	1	3	457
Percentage (%)	84.25	11.60	1.09	2.19	0.22	0.66	100

() = row %

Table 8.21. Site 22IT590: Preform Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
			Preform 1 - Cobble					
WEIGHT	15	0	53.9	32.5	12.0	112.2	100.2	1059.3
LENGTH	15	0	57.1	14.0	36.0	79.1	43.1	196.2
WIDTH	15	0	41.6	10.8	23.0	58.0	35.0	117.6
THK	15	0	23.2	6.2	14.1	38.8	24.7	38.4
			Preform 1 - Flake					
WEIGHT	29	4	27.0	14.2	8.1	66.5	58.4	202.3
LENGTH	29	4	50.5	9.6	34.3	68.9	34.6	92.1
WIDTH	32	1	35.9	7.5	20.7	51.6	30.9	56.9
THK	30	3	15.6	3.4	9.6	22.0	12.4	11.6
			Preform 1 - Indeterminate					
WEIGHT	51	14	41.4	49.2	7.4	348.2	340.8	2425.3
LENGTH	54	11	54.5	13.3	27.8	83.8	56.0	175.6
WIDTH	60	5	36.8	8.7	20.0	64.6	44.6	76.3
THK	59	6	18.4	4.8	9.5	33.8	24.3	23.3
			Preform 2 - Cobble					
WEIGHT	1	0	36.8	-	36.8	36.8	0	-
LENGTH	1	0	64.9	-	64.9	64.9	0	-
WIDTH	1	0	40.5	-	40.5	40.5	0	-
THK	1	0	18.2	-	18.2	18.2	0	-
			Preform 2 - Flake					
WEIGHT	29	6	19.5	7.7	9.2	39.8	30.6	59.9
LENGTH	28	7	50.9	9.8	38.0	75.6	37.6	69.4
WIDTH	33	2	31.7	5.2	21.2	45.0	23.8	27.2
THK	34	1	13.6	3.7	8.3	27.7	19.4	13.5
			Preform 2 - Indeterminate					
WEIGHT	43	16	22.5	12.0	6.8	71.0	64.2	143.2
LENGTH	43	16	52.6	11.4	28.6	75.4	46.8	129.7
WIDTH	55	4	33.8	8.6	15.4	57.9	42.5	74.6
THK	55	4	14.5	4.9	8.8	44.0	35.2	23.8

Table 8.22. Site 22IT590: Frequency of Cores by Raw Material Type.

Category	Bangor, Fossil.	Camden, Heated	Camden, Unheated	Ft. Payne	Ft. Payne, Fossil.	Pickwick	Conglomerate	Fe Ss	TOTAL
90^{o} Unifacial Core		5	10			2			17
180^{o} Unifacial Opposing Core		2	2						4
180^{o} Bifacial Opposing Core		1							1
180^{o} Unifacial Adjacent Core		10	15	1					26
180^{o} Bifacial Adjacent Core		2	2						4
270^{o} Unifacial Core		3	4						7
270^{o} Bifacial Core	1	2							3
360^{o} Unifacial Core			3						3
360^{o} Bifacial Core		1	1					1	3
Bipolar Core		4	1						5
Microblade Core		1							1
Core Fragment		101	34	1	1	1	1		139
Core-Other		13	12				2		27
N	1	145	84	2	1	3	3	1	240
%	0.42	60.42	35.00	0.83	0.42	1.25	1.25	0.42	100%

Table 8.23. Site 22IT590: Core Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				90° - Unifacial				
WEIGHT	21	0	140.2	125.9	6.0	540.7	534.7	15846.4
LENGTH	21	0	63.2	18.1	24.1	115.1	91.0	329.1
WIDTH	21	0	52.0	14.6	22.6	82.8	60.2	213.0
THK	21	0	36.5	12.0	14.3	62.1	47.8	144.2
				180° - Unifacial Opposing				
WEIGHT	6	0	53.5	35.9	9.7	91.7	82.0	1286.8
LENGTH	6	0	48.6	25.6	3.8	71.4	67.6	654.3
WIDTH	6	0	35.8	11.8	18.8	48.4	29.6	138.9
THK	6	0	24.2	9.9	13.0	36.3	23.3	98.3
				180° - Unifacial Adjacent				
WEIGHT	25	0	124.0	174.2	24.4	926.6	902.2	30348.6
LENGTH	25	0	63.8	15.4	45.5	126.2	80.7	238.0
WIDTH	25	0	49.9	14.9	25.5	102.7	77.2	222.3
THK	25	0	34.3	9.7	16.9	56.7	39.8	93.5
				180° - Bifacial Adjacent				
WEIGHT	6	0	120.1	73.8	19.3	232.6	213.3	5452.6
LENGTH	6	0	62.3	13.7	36.6	75.5	38.9	188.3
WIDTH	6	0	48.2	13.1	25.8	66.7	40.9	172.8
THK	6	0	35.8	11.0	21.6	48.5	26.9	121.8
				270° - Unifacial				
WEIGHT	8	0	71.4	66.8	9.4	181.0	171.6	4465.7
LENGTH	8	0	49.6	14.8	32.1	76.8	44.7	220.3
WIDTH	8	0	42.4	13.1	23.4	62.9	39.5	172.6
THK	8	0	25.2	9.3	13.5	37.5	24.0	85.9
				270° - Bifacial				
WEIGHT	4	0	33.0	16.1	11.0	46.2	35.2	260.2
LENGTH	4	0	41.8	8.3	30.0	47.6	17.6	68.2
WIDTH	4	0	32.1	5.8	25.4	39.1	13.7	33.5
THK	4	0	24.0	3.7	19.1	28.0	8.9	13.7

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
			360° - Unifacial					
WEIGHT	4	0	56.0	51.3	18.3	131.8	113.5	26.30.9
LENGTH	4	0	47.0	9.7	34.6	58.2	23.6	93.3
WIDTH	4	0	40.4	5.9	32.1	45.9	13.8	34.5
THK	4	0	25.4	9.1	18.2	38.7	20.5	82.7
			360° - Bifacial					
WEIGHT	5	0	132.4	124.9	23.3	269.0	245.7	15603.9
LENGTH	5	0	58.9	16.7	44.7	77.6	32.9	279.3
WIDTH	5	0	52.2	22.5	27.4	76.3	48.9	505.8
THK	5	0	32.2	9.5	20.0	43.0	23.0	91.1
			Bipolar Core					
WEIGHT	4	0	7.3	6.9	2.1	17.4	15.3	47.8
LENGTH	4	0	29.5	13.5	22.0	49.7	27.7	182.4
WIDTH	4	0	20.1	5.1	12.9	24.6	11.7	25.6
THK	4	0	11.9	4.4	8.0	17.0	9.0	19.5
			Microblade Core					
WEIGHT	1	0	2.0	-	2.0	2.0	0	-
LENGTH	1	0	14.0	-	14.0	14.0	0	-
WIDTH	1	0	11.2	-	11.2	11.2	0	-
THK	1	0	9.5	-	9.5	9.5	0	-
			Core - Other					
WEIGHT	25	0	123.1	127.2	11.7	589.4	577.7	16192.0
LENGTH	25	0	58.8	22.3	0	122.0	122.0	499.4
WIDTH	25	0	50.0	15.7	20.6	83.9	63.3	245.2
THK	25	0	34.9	12.6	15.4	61.6	46.2	158.4

Table 8.24. Site 22IT590: Frequency of Scrapers by Raw Material Type.

	Bangor, Bl.-Gr.	Bangor, Fossil.	Camden, Heated	Camden, Unheated	Ft. Payne	Ft. Payne, Fossil.	Pickwick	Fe Ss	Unid.	TOTAL
Unif. Side Scraper-Bld./Bld-lke. Flk.			6		1					7
Unif. End Scraper-Bld./Bld-lke. Flk.			1							1
Unif. Side-End Scraper-Bld./Bld-lke. Flk.			1		1					2
Unif. Side Scraper-Expanding Flake			13							13
Unif. End Scraper-Expanding Flake			21	2	2					25
Unif. Side-End Scraper-Expanding Flake			15	1	2				1	19
Unif. Side Scraper-Other Flake			46	5	3	2				56
Unif. End Scraper-Other Flake			31	8			3		1	43
Uniface Side-End Scraper-Other Flake			14	2	3				1	20
Unif. End Scraper-Thermal Spall			3							3
Unif. Side Scraper-Thermal Spall			2							2
Unif. Cobble Scraper				2						2
Bif. Cobble Scraper				1						1
Scraper-Biface Fragment (Recycled)			20	1	1					22
Scraper-Core (Recycled)			3							3
Notched Flake/Spokeshave			31	4	1					36
Unid. Scraper Frag.		1	38	1	4		1		1	46
Scraper-Other			3	2						5
Ovoid Biface Scraper								1		1
Biface Scraper-Flake			2							2
Graver/Scraper			2							2
Unid. Hafted End Scraper	1		2							3
Notched Flake/Spokeshave (Rec.)			3							3
Hafted End Scraper (Recycled)			3		1				1	5
N	1	1	260	29	19	2	4	1	5	322
%	0.31	0.31	80.75	9.01	5.90	0.62	1.24	0.31	1.55	100%

Table 8.25. Site 22IT590: Scraper Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Uniface Scraper on Blade/Blade - Like Flake								
WEIGHT	6	0	7.8	3.8	3.4	12.7	9.3	14.3
LENGTH	6	0	51.3	16.7	29.4	75.0	45.6	279.0
WIDTH	6	0	22.5	4.5	15.6	28.8	13.2	20.4
THK	6	0	7.2	1.7	4.5	9.0	4.5	2.8
Uniface End Scraper on Blade/Blade - Like Flake								
WEIGHT	2	0	3.6	1.1	2.8	4.4	1.6	1.3
LENGTH	2	0	29.6	9.3	23.1	36.2	13.1	85.8
WIDTH	2	0	16.7	0.5	16.4	17.1	0.7	0.2
THK	2	0	7.4	1.0	6.7	8.1	1.4	1.0
Uniface End/Side Scraper on Blade/Blade - Like Flake								
WEIGHT	1	0	0.8	-	0.8	0.8	0	-
LENGTH	1	0	22.0	-	22.0	22.0	0	-
WIDTH	1	0	12.9	-	12.9	12.9	0	-
THK	1	0	3.2	-	3.2	3.2	0	-
Uniface Side Scraper on Expanding Flake								
WEIGHT	12	0	7.1	5.9	1.0	19.2	18.2	35.3
LENGTH	12	0	34.0	9.8	18.6	51.1	32.5	95.8
WIDTH	12	0	27.1	9.0	15.0	45.3	30.3	81.9
THK	12	0	8.0	3.9	3.7	15.1	11.4	15.5
Uniface End Scraper on Expanding Flake								
WEIGHT	25	0	6.8	5.3	1.0	24.6	23.6	28.4
LENGTH	25	0	32.6	10.0	19.5	57.4	37.9	99.3
WIDTH	25	0	27.5	6.0	17.5	40.0	22.5	36.6
THK	25	0	7.6	2.4	4.0	15.0	11.0	5.8
Uniface End/Side Scraper on Expanding Flake								
WEIGHT	19	0	5.6	2.8	1.2	10.9	9.7	7.6
LENGTH	19	0	33.1	10.5	19.4	62.4	43.0	110.3
WIDTH	19	0	24.4	4.7	14.9	35.6	20.7	22.1
THK	19	0	6.8	1.8	4.0	10.0	6.0	3.3

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
			Uniface Side Scraper on Other Flake					
WEIGHT	46	1	7.4	11.0	1.1	55.5	54.4	120.0
LENGTH	46	1	31.3	10.6	15.5	57.0	41.5	112.2
WIDTH	46	1	26.2	9.2	13.4	51.0	37.6	84.7
THK	46	1	7.7	4.2	3.1	23.2	20.1	17.4
			Uniface End Scraper on Other Flake					
WEIGHT	37	0	6.9	7.9	0.9	31.9	31.0	61.7
LENGTH	37	0	26.7	10.0	6.3	50.4	44.1	100.5
WIDTH	37	0	27.9	8.6	16.0	51.2	35.2	73.9
THK	37	0	8.5	4.5	3.0	21.2	18.2	20.0
			Uniface End/Side Scraper on Other Flake					
WEIGHT	19	1	10.6	16.7	0.9	74.9	74.0	279.7
LENGTH	19	1	30.0	10.8	13.0	52.8	39.8	116.8
WIDTH	19	1	27.9	11.0	11.0	61.6	50.6	121.7
THK	19	1	8.9	5.1	3.2	24.4	21.2	25.8
			Uniface End Scraper on Thermal Spall					
WEIGHT	3	0	13.3	13.6	4.0	28.9	24.9	185.4
LENGTH	3	0	33.9	11.2	26.1	46.7	20.6	125.3
WIDTH	3	0	27.5	6.4	23.88	34.8	11.0	40.3
THK	3	0	12.1	4.4	9.5	17.2	7.7	19.5
			Uniface Cobble Scraper					
WEIGHT	2	0	48.2	52.4	11.2	85.3	74.1	2745.4
LENGTH	2	0	58.2	22.6	42.3	74.2	31.9	508.8
WIDTH	2	0	38.1	18.5	25.0	51.2	26.2	343.2
THK	2	0	18.1	8.5	12.1	24.1	12.0	72.0
			Biface Cobble Scraper					
WEIGHT	1	0	3.2	-	3.2	3.2	0	-
LENGTH	1	0	27.2	-	27.2	27.2	0	-
WIDTH	1	0	17.4	-	17.4	17.4	0	-
THK	1	0	6.7	-	6.7	6.7	0	-

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Scraper on a Biface Fragment (Recycled)								
WEIGHT	20	0	11.7	11.5	2.0	37.9	35.9	131.7
LENGTH	20	0	36.0	12.4	21.0	65.6	44.6	153.5
WIDTH	20	0	28.8	10.3	12.8	52.3	39.5	106.9
THK	20	0	9.8	3.5	6.5	20.8	14.3	12.0
Scraper on a Core (Recycled)								
WEIGHT	3	0	25.7	32.1	1.4	2.1	60.7	1029.7
LENGTH	3	0	48.9	13.4	38.0	63.9	25.9	180.3
WIDTH	3	0	31.1	8.7	24.1	40.8	16.7	74.9
THK	3	0	20.0	2.1	18.3	22.3	4.0	4.2
Notched Flake/Spokeshave								
WEIGHT	38	0	4.5	3.8	0.6	16.5	15.9	14.2
LENGTH	38	0	29.6	10.1	14.0	59.0	45.0	101.0
WIDTH	38	0	24.6	6.9	8.6	39.1	30.5	48.1
THK	38	0	7.1	3.6	2.6	18.1	15.5	13.3
Scraper Other								
WEIGHT	2	0	49.5	58.7	8.0	91.0	83.0	344.5
LENGTH	2	0	52.3	29.2	31.7	73.0	41.3	852.8
WIDTH	2	0	37.5	15.4	26.6	48.4	21.8	237.6
THK	2	0	20.4	11.5	12.3	28.5	16.2	131.2
Biface Ovoid Scraper								
WEIGHT	1	0	93.5	-	93.5	93.5	0	-
LENGTH	1	0	64.5	-	64.5	64.5	0	-
WIDTH	1	0	55.0	-	55.0	55.0	0	-
THK	1	0	20.8	-	20.8	20.8	0	-
Biface Flake Scraper								
WEIGHT	2	0	1.5	0.6	1.1	2.0	0.9	0.4
LENGTH	2	0	21.3	6.2	17.0	25.7	8.7	37.8
WIDTH	2	0	20.4	1.1	19.6	21.2	1.6	1.3
THK	2	0	3.8	1.2	3.0	4.7	1.7	1.4

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
			Biface Scraper/Graver					
WEIGHT	2	0	10.7	5.4	6.9	14.6	7.7	29.6
LENGTH	2	0	33.4	0.6	33.0	33.9	0.9	0.4
WIDTH	2	0	31.0	9.5	24.3	37.8	13.5	91.1
THK	2	0	13.4	5.6	9.5	17.4	7.9	31.2
			Hafted End Scraper					
WEIGHT	3	0	6.0	3.2	3.4	9.5	6.1	10.0
LENGTH	3	0	27.7	9.7	21.2	38.8	17.6	93.8
WIDTH	3	0	28.4	2.7	26.2	31.5	5.3	7.5
THK	3	0	8.0	0.8	7.3	8.8	1.5	0.6
			Notched Flake/Spokeshave					
WEIGHT	2	0	3.5	0.8	2.9	4.1	1.2	0.7
LENGTH	2	0	29.7	4.0	26.9	32.5	5.6	15.7
WIDTH	2	0	12.1	6.4	7.6	16.7	9.1	41.4
THK	2	0	8.0	2.0	6.6	9.4	2.8	3.9
			Hafted End Scraper (Recycled)					
WEIGHT	4	0	9.5	4.4	3.2	13.3	10.1	19.3
LENGTH	4	0	35.8	12.1	18.4	44.5	26.1	146.4
WIDTH	4	0	31.5	2.9	27.9	34.2	6.3	8.2
THK	4	0	8.4	1.9	6.7	10.8	4.1	3.5

Table 8.26 . Site 22IT590: Frequency of Drills, Perforators, Etc. by Raw Material Type.

Category	Bangor, Fossil.	Camden. Heated	Camden, Unheated	Ft. Payne	Ft. Payne Fossil.	Pickwick	Quartzite, Talht.	Unid.	TOTAL
Shaft Drill	1	5		1					7
Expanding Base Drill		18	3	6	1	1		1	30
Stemmed Drill (Rec.)		16		2		1		1	20
Drill Fragment	1	30	5	16		1	1	2	56
Reamer		4		1					5
Perforator		20	2	2					24
Graver		11	3	3		1			18
Microlith		20	4	2	1				27
Denticulate						1			1
Microperforator		2							2
Reamer (Rec.)		2							2
Perforator (Rec.)		3							3
N	2	131	17	33	2	5	1	4	195
%	1.03	67.18	8.72	16.92	1.03	2.56	0.51	2.05	100%

Table 8.27. Site 22IT590: Drills, Etc. Measurement Su mary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Shaft Drill				
WEIGHT	2	0	2.2	1.0	1.5	2.9	1.4	1.0
LENGTH	2	0	42.3	9.5	35.6	49.0	13.4	89.8
WIDTH	2	0	8.8	0.2	8.7	9.0	0.3	0
THK	2	0	5.5	1.0	4.8	6.2	1.4	1.0
				Expanding Base Drill				
WEIGHT	17	10	5.6	3.3	2.0	14.0	12.0	11.1
LENGTH	10	17	48.0	12.5	30.7	66.5	35.8	156.1
WIDTH	27	0	22.3	6.7	13.5	40.3	26.8	44.3
THK	19	8	8.4	1.7	5.5	11.3	5.8	2.8
				Stemmed Drill (Recycled)				
WEIGHT	13	5	7.7	4.3	4.3	20.0	15.7	18.4
LENGTH	9	9	53.2	13.1	36.0	80.2	44.2	172.3
WIDTH	18	0	23.9	2.7	18.9	27.8	8.9	7.4
THK	15	3	8.5	2.6	1.8	13.6	11.8	6.7
				Reamer				
WEIGHT	4	0	8.1	3.6	4.8	12.3	7.5	13.3
LENGTH	4	0	47.8	13.7	30.8	62.0	31.2	186.5
WIDTH	4	0	23.6	3.9	20.3	29.1	8.8	14.9
THK	4	0	9.5	3.0	6.9	13.9	7.0	9.3
				Perforator				
WEIGHT	22	1	2.1	2.0	0.8	10.1	9.3	3.8
LENGTH	23	0	27.5	7.0	17.5	44.6	27.1	48.7
WIDTH	22	1	17.8	5.6	7.8	27.4	19.6	31.3
THK	22	1	5.4	2.3	2.6	11.8	9.2	5.1
				Graver				
WEIGHT	15	0	2.8	3.2	0.2	13.0	12.8	10.2
LENGTH	15	0	23.7	7.3	13.8	39.6	25.8	52.9
WIDTH	15	0	19.8	6.6	11.9	35.4	23.5	43.5
THK	15	0	5.6	2.7	2.4	11.7	9.3	7.0

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Microlith				
WEIGHT	23	1	2.1	3.3	0.3	13.0	12.7	10.7
LENGTH	23	1	21.5	5.0	11.3	32.5	21.2	25.1
WIDTH	24	0	8.8	2.3	5.2	14.9	9.7	5.5
THK	24	0	4.2	1.4	0.5	7.0	6.5	2.1
				Denticulate				
WEIGHT	1	0	1.6	-	1.6	1.6	0	-
LENGTH	1	0	27.9	-	27.9	27.9	0	-
WIDTH	1	0	10.9	-	10.9	10.9	0	-
THK	1	0	5.9	-	5.9	5.9	0	-
				Microperforator				
WEIGHT	2	0	0.2	0.1	0.2	0.3	0.1	0
LENGTH	2	0	15.5	1.6	14.4	16.6	2.2	2.4
WIDTH	2	0	9.6	2.5	7.9	11.4	3.5	6.1
THK	2	0	2.5	0.4	2.3	2.8	0.5	0.1
				Reamer (Recycled)				
WEIGHT	2	0	9.9	6.9	5.0	14.8	9.8	48.0
LENGTH	2	0	46.8	7.8	41.3	52.4	11.1	61.6
WIDTH	2	0	23.8	7.8	18.3	29.3	11.0	60.5
THK	2	0	8.8	2.1	7.3	10.3	3.0	4.5
				Perforator (Recycled)				
WEIGHT	3	0	3.7	1.1	2.5	4.4	1.9	1.1
LENGTH	3	0	31.7	6.7	24.0	36.0	12.0	44.3
WIDTH	3	0	19.0	1.4	17.6	20.3	2.7	1.8
THK	3	0	7.4	0.9	6.5	8.2	1.7	0.7

Table 8.28 Site 22IT590: Frequency of Other Uniface and Biface Tools by Raw Material Type.

Category	Bangor, Bl.-Gr.	Bangor, Fossil.	Camden, Ht.	Camden, Unnt.	Ft. Payne	Ft. Payne, Fossil.	Oolitic	Pickwick	Tusca., Ht.	Tusca., Unht.	Conglomerate	Hematite	Quartzite	Quartzite, Talht.	Fe Ss	Siltstone	Unidentified	TOTAL
Unif. Chopper			2	9														11
Bif. Chopper			3	15							2				3	1		24
Unif. Adze				2														2
Bif. Adze			5	2	1			1										9
Unif. Flake Knife			38	7	2													47
Bif. Flake Knife			28	5	4			1									1	39
Unif. Cobble Knife			3															3
Bif. Digging Tool															2			2
Unid. Chipped Stone Frag.	3	19	1,904	178	294	24		11	1	1	4	1	2	6	3		31	2,482
Other			5	1														6
Wedge			5		1	1												7
Chopper/Hammerstone				4											1			5
Chisel		1	13	2			1	1										18
Burinated Biface (Rec.)			2															2
Adze/Chisel			5	1				1										7
Bif. Flake Knife/ Spokeshave (Rec.)			1															1
Bif. Knife-Thermal Spall			2															2
Piece Esquille			5		1													6
Piece Esquille-Biface (Rec.)			1															1
N	3	20	2,022	226	303	25	1	15	1	1	6	1	2	6	9	1	32	2,674
%	0.11	0.75	75.62	8.45	11.33	0.93	0.04	0.56	0.04	0.04	0.22	0.04	0.07	0.22	0.34	0.04	1.20	100%

Table 8.29. Site 22IT590: Uniface and Biface Tools Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Uniface Chopper								
WEIGHT	11	0	162.0	92.2	43.1	319.2	276.1	
LENGTH	11	0	73.7	18.9	47.8	113.0	65.2	
WIDTH	11	0	60.5	14.2	41.8	81.5	39.7	
THK	11	0	33.8	8.8	20.3	48.0	27.7	
Biface Chopper								
WEIGHT	23	0	215.2	118.6	82.0	668.5	586.5	
LENGTH	23	0	78.2	14.3	58.1	120.8	62.7	
WIDTH	23	0	64.7	17.0	41.3	123.0	81.7	
THK	23	0	38.0	10.6	22.7	74.2	51.5	
Uniface Adze								
WEIGHT	2	0	52.2	13.5	42.7	61.8	19.1	
LENGTH	2	0	52.3	0.4	52.0	52.5	0.5	
WIDTH	2	0	45.4	10.5	38.0	52.8	14.8	
THK	2	0	20.5	3.5	18.0	23.0	5.0	
Biface Adze								
WEIGHT	5	0	26.8	10.8	11.9	41.4	29.5	
LENGTH	5	0	46.9	6.9	36.0	55.0	19.0	
WIDTH	5	0	36.4	6.2	29.0	44.1	15.1	
THK	5	0	15.1	3.7	10.3	19.8	9.5	
Uniface Flake Knife								
WEIGHT	30	0	15.5	14.1	1.0	54.1	53.1	
LENGTH	30	0	45.7	14.7	19.0	78.0	59.0	
WIDTH	30	0	34.5	10.8	14.1	59.2	45.1	
THK	30	0	10.3	5.9	3.2	30.5	27.3	
Biface Flake Knife								
WEIGHT	24	0	19.3	13.7	2.8	58.9	56.1	
LENGTH	24	0	51.8	11.5	30.7	71.5	40.8	
WIDTH	24	0	33.9	8.6	21.8	55.0	33.2	
THK	24	0	11.3	3.6	3.9	22.2	18.3	

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
Uniface Cobble Knife								
WEIGHT	2	0	49.9	42.5	19.9	80.0	60.1	
LENGTH	2	0	57.3	19.4	43.5	71.0	27.5	
WIDTH	2	0	41.7	8.9	35.4	48.0	12.6	
THK	2	0	20.6	11.9	12.2	29.0	16.8	
Uniface/Biface Other								
WEIGHT	5	0	45.7	42.4	0.6	107.5	106.9	
LENGTH	5	0	47.3	24.2	7.7	68.0	60.3	
WIDTH	5	0	34.2	14.7	12.0	46.4	34.4	
THK	5	0	18.3	11.2	5.9	31.5	25.6	
Uniface/Biface Wedge								
WEIGHT	5	0	9.3	8.7	2.0	23.4	21.4	
LENGTH	5	0	33.1	11.3	20.8	45.5	24.7	
WIDTH	5	0	22.2	6.2	15.4	28.9	13.5	
THK	5	0	7.8	1.8	6.7	10.9	4.2	
Hammerstone/Chopper								
WEIGHT	4	0	282.3	81.1	191.4	363.6	172.2	
LENGTH	4	0	78.6	11.2	65.0	92.0	27.0	
WIDTH	4	0	65.1	8.2	58.1	75.3	17.2	
THK	4	0	50.8	9.1	40.0	59.9	19.9	
Chisel								
WEIGHT	12	0	17.4	18.8	2.7	64.9	62.2	
LENGTH	12	0	41.2	15.2	28.4	72.5	44.1	
WIDTH	12	0	29.8	12.4	14.6	59.6	45.0	
THK	12	0	13.9	6.1	6.4	24.0	17.6	
Burinated Biface								
WEIGHT	2	0	1.9	0.1	1.8	2.0	0.2	
LENGTH	2	0	27.1	7.4	21.9	32.3	10.4	
WIDTH	2	0	9.5	1.1	8.8	10.3	1.5	
THK	2	0	7.7	2.1	6.2	9.2	3.0	

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Chisel/Adze				
WEIGHT	5	0	58.4	60.5	14.9	163.5	148.6	
LENGTH	5	0	62.5	30.4	44.0	115.8	71.8	
WIDTH	5	0	36.2	7.9	26.4	44.6	18.2	
THK	5	0	20.6	7.7	13.8	33.1	19.3	
				Splintered Wedge (Piece Esquille)				
WEIGHT	6	0	4.1	4.6	0.2	12.4	12.2	
LENGTH	6	0	21.6	8.5	14.0	37.3	23.3	
WIDTH	6	0	17.0	7.5	7.0	26.4	19.4	
THK	6	0	8.0	3.7	3.1	13.4	10.3	
				Splintered Wedge on Biface (Recycled)				
WEIGHT	1	0	5.1	-	5.1	5.1	0	-
LENGTH	1	0	22.8	-	22.8	22.8	0	-
WIDTH	1	0	20.6	-	20.6	20.6	0	-
THK	1	0	7.8	-	7.8	7.8	0	-

Table 8.30. Site 22IT590: Frequency of Debitage by Raw Material Type.

MATERIAL CLASS	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17	TOTAL
1"-BANGOR FOSSIL	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
1"-CAMDEN HEATED	0	1	4	2	5	2	12	22	26	21	4	1	0	0	0	0	0	100
1"-CAMDEN UNHEATED	0	2	5	1	6	19	21	47	36	26	13	2	0	0	0	0	0	178
1"-FT PAYNE	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	4
1"-FT PAYNE FOSL	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
1"-PICKWICK	0	0	0	0	1	0	0	3	2	2	1	0	0	0	0	0	0	9
1"-CONGLOMERATE	0	0	1	1	0	1	7	0	1	1	0	0	0	0	0	0	0	12
1"-QUARTZITE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1"-SANDSTONE	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
1"-SANDSTN FERR	0	0	0	0	1	1	7	3	1	1	1	0	0	0	0	0	0	15
1"-SILTSTONE	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
1"-UNIDENTIFIED	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2

Table 8.30 (cont.)

MATERIAL CLASS	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17	TOTAL
.50"-BANGOR BL-GR	0	0	0	0	0	1	0	2	2	3	2	0	0	0	0	0	0	10
.50"-BANGOR FOSSIL	0	0	0	0	3	2	3	5	7	3	2	1	0	0	0	0	0	26
.50"-BUFFALO K GRAY	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
.50"-CAMDEN HEATED	0	514	298	101	388	539	1544	1992	1654	1165	371	98	3	0	0	0	0	8667
.50"-CAMDEN UNHEATED	0	140	53	43	167	270	536	884	789	530	195	47	0	1	1	0	0	3656
.50"-FT PAYNE	0	3	9	4	9	8	36	79	119	84	33	5	0	0	0	0	0	389
.50"-FT PAYNE FOSL	0	1	0	1	4	3	4	5	10	10	1	5	0	0	0	0	0	44
.50"-NOVACULITE	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
.50"-PICKWICK	0	1	1	0	2	8	6	25	16	14	3	0	0	0	0	0	0	76
.50"-TUSC UNHT	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3
.50"-CONGLOMERATE	0	0	0	0	18	13	21	32	14	7	0	0	0	0	0	0	0	105
.50"-HEMATITE	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0	5
.50"-LIMONITE	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1

Table 8.30 (cont.)

MATERIAL CLASS	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17	TOTAL
.50"-QUARTZ	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
.50"-QUARTZITE	0	0	0	0	0	0	2	3	3	2	1	0	0	0	0	0	0	11
.50"-TALHT QUARTZ	0	0	0	0	0	1	0	2	1	0	0	0	0	0	0	0	0	4
.50"-SANDSTONE	0	0	0	0	0	1	5	5	4	1	0	0	0	0	0	0	0	16
.50"-SANDSTN FERR	0	0	4	1	18	18	62	55	25	5	8	0	0	0	0	0	0	196
.50"-SILTSTONE	0	0	1	1	0	0	3	3	0	0	0	0	0	0	0	0	0	8
.50"-UNIDENTIFIED	0	0	0	0	1	2	10	16	18	16	2	3	0	0	0	0	0	68
.25"-AGATE	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
.25"-BANGOR BL-GR	0	0	0	0	2	3	6	8	19	12	13	1	0	0	0	0	0	64
.25"-BANGOR FOSSIL	0	2	2	1	8	27	32	42	24	21	6	3	0	0	0	0	0	168
.25"-BUFFALO F GRAY	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
.25"-CAMDEN HEATED	0	4237	2063	874	2736	3542	9660	10800	8206	5975	2695	768	3	0	0	0	0	51559

Table 8.30 (cont.)

MATERIAL CLASS	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17	TOTAL
.25"-CAMDEN UNHEATED	0	717	301	177	653	1081	2639	2921	2839	1884	720	153	1	0	0	0	0	14116
.25"-FT PAYNE	0	142	146	58	166	163	462	676	602	459	208	35	0	1	0	0	0	3118
.25"-FT PAYNE FOSL	0	5	4	2	10	14	34	50	41	30	19	3	0	0	0	0	0	212
.25"-NOVACULITE	0	0	2	1	0	2	0	0	0	0	0	0	0	0	0	0	0	5
.25"-OOLITIC	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
.25"-PICKWICK	0	3	1	5	7	13	29	24	35	23	5	6	0	0	0	0	0	151
.25"-TUSC HEAT	0	0	2	2	1	3	5	2	14	5	2	0	0	0	0	0	0	36
.25"-TUSC UNHT	0	0	2	0	0	0	1	12	4	0	0	0	0	0	0	0	0	19
.25"-CONGLOMERATE	0	3	4	1	14	22	94	74	36	18	7	0	0	0	0	0	0	273
.25"-GREENSTONE	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	4
.25"-HEMATITE	0	0	0	1	2	3	8	5	1	0	0	1	0	0	0	0	0	21
.25"-LIMONITE	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1

Table 8.30 (cont.)

MATERIAL CLASS	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17	TOTAL
.25"-QUARTZ	0	0	0	0	1	1	1	0	1	1	0	0	0	0	0	0	0	5
.25"-QUARTZITE	0	0	0	0	0	2	3	4	5	0	1	0	0	0	0	0	0	15
.25"-TALHT QUARTZ	0	0	5	0	2	1	6	4	2	3	1	0	0	0	0	0	0	24
.25"-SANDSTONE	0	0	0	5	5	0	12	3	6	1	9	1	0	0	0	0	0	42
.25"-SANDSTN FERR	0	2	11	21	47	81	254	198	111	44	21	7	0	0	0	0	0	797
.25"-SILTSTONE	0	0	0	0	1	4	11	13	4	0	3	0	0	0	0	0	0	36
.25"-UNIDENTIFIED	0	4	9	3	21	25	84	63	66	49	18	1	0	0	0	0	0	343
PRISM-CAMDEN HEATED	0	0	0	0	0	[illegible]	0	0	0	1	0	0	0	0	0	0	0	2
PRISM-FT PAYNE	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
OTHER-BANGOR BL-GR	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
OTHER-CAMDEN HEATED	0	11	12	2	14	11	65	79	78	34	20	11	0	0	0	0	0	337
OTHER-CAMDEN UNHEAT	0	0	5	0	7	6	10	25	20	23	2	1	0	0	0	0	0	99
OTHER-FT PAYNE	0	0	1	0	0	0	2	1	1	4	1	1	0	0	0	0	0	11
OTHER-FT PAYNE FOSL	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
OTHER-PICKWICK	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
OTHER-HEMATITE	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
OTHER-SANDSTN FERR	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	3
OTHER-UNIDENTIFIED	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	3
TOTAL	0	5818	2947	1308	4320	5898	15704	18198	14859	10483	4392	1154	7	2	1	0	0	85091

Table 8.31. Site 22IT590: Frequency of Ground Stone by Raw Material Type.

	Camden, Ht.	Camden, Unht.	Conglomerate	Greenstone	Hematite	Limonite	Petrified Wood	Quartzite	Quartzite, Talht.	Sandstone	Fe Ss	Siltstone	Steatite	Total
Hammerstone	6	18	6					13		1	2			46
Anvilstone										2	6			8
Pitted Anvilstone			2					1		2	8			13
Hammer/Anvilstone			1					1						2
Abrader								1		2	4	2		9
Muller		1						1		3	6			11
Mortar											3			3
Pestle											1			1
Grooved Axe											1			1
Gorget												1		1
Atlatl Weight				4	1							2		7
Bead				1										1
Hoe Chip	1													1
Steatite Sherd													4	4
Sandstone Sherd										1				1
Ground Limonite						17								17
Ground Hematite					28									28
Edge Ground Cobble									1					1
Unid. Ground Stone Frag.			2	3	18	3	2	1		93	166	8		296
Other (Ground Flake)			1		5	2		1		3	91	21		124
Muller/Pitted Anvilstone											3			3
Drill Core					1									1
Bead Preform					1									1
Muller/Hammerstone								1			1			2
Abrader/Anvilstone											1			1
Awl							6							6
N	7	19	12	8	54	22	8	20	1	107	293	34	4	589
%	1.19	3.23	2.04	1.36	9.17	3.74	1.36	3.40	0.17	18.17	49.75	5.77	0.68	100%

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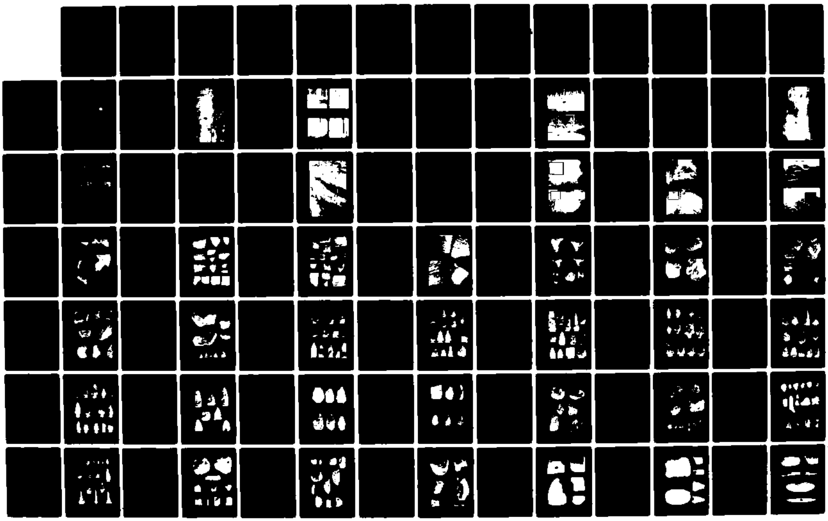

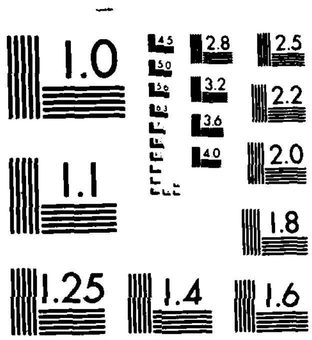

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Table 8.32. Site 22IT590: Ground Stone Tool Measurement Summary Data.

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Hammerstone				
WEIGHT	37	0	203.7	167.1	30.8	694.3	663.5	27916.4
LENGTH	37	0	68.8	18.1	39.7	119.2	79.5	328.7
WIDTH	37	0	53.6	14.1	25.5	77.8	52.3	199.1
THK	37	0	37.9	11.3	19.5	66.6	47.1	128.4
HOLEDIAM	0	37	-	-	-	-	-	-
				Anvilstone				
WEIGHT	7	0	975.6	1018.5	289.7	2543.4	2253.7	1037423.4
LENGTH	7	0	147.1	88.1	81.1	276.0	194.9	7758.6
WIDTH	7	0	113.2	63.9	60.9	228.0	167.1	4089.4
THK	7	0	37.2	6.6	25.4	45.9	20.5	44.0
HOLEDIAM	0	7	-	-	-	-	-	-
				Pitted Anvilstone				
WEIGHT	9	0	783.7	438.0	225.4	1283.5	1058.1	191814.0
LENGTH	9	0	118.4	28.5	74.7	149.3	74.6	813.8
WIDTH	9	0	104.3	27.2	71.0	145.0	74.0	740.3
THK	9	0	43.6	8.3	27.6	55.4	27.8	69.0
HOLEDIAM	0	9	-	-	-	-	-	-
				Anvil/Hammerstone				
WEIGHT	2	0	638.4	21.4	623.3	653.5	30.2	456.0
LENGTH	2	0	101.3	1.6	100.2	102.5	2.3	2.6
WIDTH	2	0	84.6	13.2	75.3	94.0	18.7	174.8
THK	2	0	52.6	1.7	51.4	53.8	2.4	2.9
HOLEDIAM	0	2	-	-	-	-	-	-
				Abrader				
WEIGHT	6	0	262.1	381.0	54.2	1028.7	974.5	145194.9
LENGTH	6	0	78.5	39.0	46.2	149.3	103.1	1519.6
WIDTH	6	0	51.4	15.1	39.9	76.8	36.9	228.7
THK	6	0	31.9	9.0	23.4	48.0	24.6	80.4
HOLEDIAM	0	6	-	-	-	-	-	-

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Muller				
WEIGHT	7	0	369.2	318.3	106.1	1037.5	931.4	101324.9
LENGTH	7	0	90.7	26.6	57.8	129.5	71.7	706.6
WIDTH	7	0	65.5	16.9	43.9	93.7	49.8	284.4
THK	7	0	38.9	13.4	21.7	62.0	40.3	178.6
HOLEDIAM	0	7	-	-	-	-	-	-
				Mortar				
WEIGHT	2	0	1577.5	1081.0	813.2	2341.9	1528.7	1168461.8
LENGTH	2	0	162.6	57.1	122.3	203.0	80.7	3256.2
WIDTH	2	0	138.0	41.0	109.0	167.0	58.0	1682.0
THK	2	0	41.7	7.7	36.3	47.2	10.9	59.4
HOLEDIAM	0	2	-	-	-	-	-	-
				Pestle				
WEIGHT	1	0	794.1	-	794.1	794.1	0	-
LENGTH	1	0	116.9	-	116.9	116.9	0	-
WIDTH	1	0	79.1	-	79.1	79.1	0	-
THK	1	0	58.4	-	58.4	58.4	0	-
HOLEDIAM	0	1	-	-	-	-	-	-
				Grooved Axe				
WEIGHT	1	0	599.1	-	599.1	599.1	0	-
LENGTH	1	0	110.5	-	110.5	110.5	0	-
WIDTH	1	0	92.3	-	92.3	92.3	0	-
THK	1	0	37.6	-	37.6	37.6	0	-
HOLEDIAM	0	1	-	-	-	-	-	-
				Atlatl Weight				
WEIGHT	1	3	175.5	-	175.5	175.5	0	-
LENGTH	1	3	124.1	-	124.1	124.1	0	-
WIDTH	1	3	45.2	-	45.2	45.2	0	-
THK	1	3	21.2	-	21.2	21.2	0	-
HOLEDIAM	4	0	11.8	1.1	10.4	13.0	2.6	1.2

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Bead				
WEIGHT	1	0	4.7	-	4.7	4.7	0	-
LENGTH	1	0	20.4	-	20.4	20.4	0	-
WIDTH	1	0	12.4	-	12.4	12.4	0	-
THK	1	0	10.4	-	10.4	10.4	0	-
HOLEDIAM	0	1	-	-	-	-	-	-
				Edge Ground Cobble				
WEIGHT	1	0	555.5	-	555.5	555.5	0	-
LENGTH	1	0	93.1	-	93.1	93.1	0	-
WIDTH	1	0	90.6	-	90.6	90.6	0	-
THK	1	0	54.6	-	54.6	54.6	0	-
HOLEDIAM	0	1	-	-	-	-	-	-
				Muller/Pitted Anvil				
WEIGHT	2	0	447.8	37.4	428.5	467.2	38.7	748.8
LENGTH	2	0	98.0	15.6	87.0	109.1	22.1	244.2
WIDTH	2	0	71.0	3.7	68.4	73.7	5.3	14.0
THK	2	0	37.7	3.3	35.4	40.0	4.6	10.6
HOLEDIAM	0	2	-	-	-	-	-	-
				Drill/Core				
WEIGHT	1	0	1.5	-	1.5	1.5	0	-
LENGTH	1	0	12.7	-	12.7	12.7	0	-
WIDTH	1	0	11.3	-	11.3	11.3	0	-
THK	1	0	10.0	-	10.0	10.0	0	-
HOLEDIAM	0	1	-	-	-	-	-	-
				Bead/Preform				
WEIGHT	1	0	2.6	-	2.6	2.6	0	-
LENGTH	1	0	19.1	-	19.1	19.1	0	-
WIDTH	1	0	14.5	-	14.5	14.5	0	-
THK	1	0	10.3	-	10.3	10.3	0	-
HOLEDIAM	0	1	-	-	-	-	-	-

VARIABLE	N	N MISS	MEAN	SD	MIN VALUE	MAX VALUE	RANGE	VARIANCE
				Abrader/Anvil				
WEIGHT	1	0	563.8	-	563.8	563.8	0	-
LENGTH	1	0	175.0	-	175.2	175.2	0	-
WIDTH	1	0	134.0	-	134.0	134.0	0	-
THK	1	0	24.7	-	24.7	24.7	0	-
HOLEDIAM	0	1	-	-	-	-	-	-
				Awl				
WEIGHT	6	0	0.2	0.1	0.1	0.4	0.3	0
LENGTH	6	0	24.3	7.0	16.9	35.2	18.3	48.8
WIDTH	6	0	2.7	0.4	2.1	3.2	1.1	0.2
THK	6	0	2.4	0.5	1.6	3.0	1.4	0.3
HOLEDIAM	0	6	-	-	-	-	-	-

Table 8.33. Site 22IT590: Distribution of Historic Debris.

Provenience	Ceramic: Whiteware sherds	Glass: Clear glass bottle neck frag.	Glass: Pale pink glass frag.	Metal: Large unident. cast-iron frag.	Metal: Bent 16-20 penny wire nail	Metal: U-shaped staple	Metal: Nail frag.	Metal: Wire finishing nail	Metal: Unid. metal frag.	Metal: Cut nail frag. (finishing?)	Metal: Circular saw tooth (mill)	Metal: Unid. metal cap (bottle?)	Metal: Metal container frag. (tin can?)	Metal: Barbed wire frag.	Metal: 8-penny wire nail	Misc.: Rubber faucet washer	Misc.: Brick frag. (?)	TOTAL
T-7, L-1	4	1					2											7
T-8, L-1						1												1
T-12, L-1				1	1													2
T-14, L-1										1								1
T-15, L-1											1							1
T-18, L-1												1	4					5
126S/200W, L-2									1					1	1			3
128S/200W, L-2	1		2														1	4
T-5, L-3, Seg. B								1	4									5
T-16, L-3																1		1
TOTAL	5	1	2	1	1	1	2	1	5	1	1	1	4	1	1	1	1	30

NOTE: T = Test Unit; L = Level; Seg. = Segment.

Table 8.34. Site 22IT590: Summary of Plant Macrofossil Data.

SAMPLE			ANALYSIS DATA					
ID	PROVENIENCE	VOLUME (l)	TOTAL FLORA WT.[a] (g)	HICKORY NUT *Carya* spp.[b] (g)	ACORN *Quercus* spp.[b] (g)	SEED	WOOD[c] (g)	OTHER
742C	BLOCK A-Z UNIT:82S/194W Lev. 5 (96.90)	1.00	2.50	2.10		1 spherical (D[d] ~ 1.00mm)	0.20 indeterminate wood	1 exine?
760C	Lev. 6 (96.80)	1.40	2.75	2.60	(2)[c]		0.15 indeterminate wood and resin	1 indeterminate?
782C	Lev. 7 (96.70)	1.40	3.30	3.00	(4)		0.45 indeterminate wood and resin	
787C	Lev. 8 (96.60)	1.20	5.00	4.90	(2)		0.15 indeterminate wood and resin	
826C	Lev. 9 (96.50)	1.80	2.80	2.70			0.10 indeterminate wood and resin	
953C	Lev. 10 (96.40) Seg. A	0.70	0.90	1.00	(4) 0.10		0.10 indeterminate wood and resin	
1329C	Lev. 11 (96.30) Seg. A	1.50	0.38	0.50			<0.05 indeterminate wood	
102C	FEATURE 6 WS (95.85↓)	19.25	75.40	10.65	0.90	1 (<0.05 grams) walnut frag. (*Juglans*)	63.30 indeterminate wood, pine, and resin	
849C	FEATURE 8 (96.37↓)	393.60	203.80	196.95	1.15	1 (<0.05 grams) walnut frag. (*Juglans*) 1 exine 4 spherical or ellipsoid	2.15 ring-porous hardwood	

Table 8.34 (cont.)

SAMPLE			ANALYSIS DATA					
ID	PROVENIENCE	VOLUME (l)	TOTAL FLORA WT.[a] (g)	HICKORY NUT *Carya* spp.[b] (g)	ACORN *Quercus* sp.[b] (g)	SEED	WOOD[e] (g)	OTHER
764C	FEATURE 9 (96.86N)	2.00	4.35	4.20			0.10 indeterminate wood	
930C	FEATURE 13 (95.90N)	10.00	3.40	3.05	<0.05	4 spherical	<0.05 indeterminate wood	
1317C	FEATURE 16 SE (96.30N)	192.00	59.20	57.70	0.40		1.60 oak (*Quercus*), bark	
1544C	FEATURE 17 SW (96.20N)	256.80	112.50	99.45	0.60	5 spherical 1 exine	1.45 hardwood	
1546C	FEATURE 18 (96.20N)	165.60	16.20	15.45	0.20	4 yellow star grass (*Hypoxis*) 867 spherical ($D^d \sim 0.50$mm)	1.00 hardwood	

[a]Total carbonized botanical weight.

[b]All the carbonized botanical remains under the acorn and hickory columns are pericarp fragments unless otherwise specified.

[c]Numbers inside parenthesis under columns (whose weight is denoted by grams) indicate actual botanical count.

[d]D represents the diameter of the material.

[e]Material listed under the wood column is not the actual total of wood recovered; it is mixed with other materials.

Table 8.35. Site 22IT590: Summary of Pollen Data.

Sample No.	Provinience[a]	Type	Number[b]	% of pollen sum	Remarks
590-2	A-W; 96.40;	Spruce	2	6	Associated with Early Archaic/
	9-2-B	Fir	1	3	Middle Archiac (?) component.
		White Pine	1	3	
		Pine indet.	7	23	
		Hemlock	4+	13	
		Birch (small)	11	35	
		Beech	1	3	
		Oak	1	3	
		Hickory	1	3	
		Arboreal Sum	29	94	
		Ambrosia-type	2	6	
		Herb. Sum	2	6	
		Pollen Sum	31	100	
		Misc.:			
		Monolete Fern	2	6	
		Botrychium	2	6	
		Lycopodium	2	6	
		Clavatum	1	3	

Table 8.35 (cont.)

Sample No.	Provinience[a]	Type	Number[b]	% of pollen sum	Remarks
590-3	Strat. Trench 4; 76[c]	Ambrosia	1	50	Stratigraphic sample (ca. 10,000 years B.P.).
		Silver Maple	1	50	
			2	100	
590-4	Strat. Trench 4; 96[c]	ND	ND	ND	Stratigraphic sample (ca. >10,000 years B.P.).
590-5	Strat. Trench 4; 130[c]	ND	ND	ND	Stratigaraphic sample (ca. Late Pleistocene?)
590-6	A-X; 96.42; 9.2	Pine	4½	29	Associated with Early Archaic/ Middle Archaic (?) component.
		Hemlock	1	6	
		Unident. conifer (Pine ?)	3	19	
		Ash	1	6	
		Elm	1	6	
		Oak?	1	6	
		Arboreal Sum	11½	72	
		Ambrosia	1	6	
		Cheno.-Am.	1	6	
		Compositae	1	6	

Table 8.35 (cont.)

Sample No.	Provinience[a]	Type	Number[b]	% of pollen sum	Remarks
		Unident.	1	6	
		Herb. Sum	4	24	
		Pollen Sum	15½	96	
590-7	A-X; 96.37; 10-1	Birch	3	43	Associated with Early Archaic component.
		Non-White Pine	2	29	
		Oak	1	14	
		Arboreal Sum		86	
		Locopodium Clavatum	1	14	
		Herb. Sum	1	14	
		Pollen Sum	7	100	
590-8	A-X; 96.32; 10-2	ND	ND	ND	Associated with Early Archaic component.
590-9	A-X; 96.27; 11-1	Pine	2	14	Associated with Early Archaic component.
		Elm	4	29	
		Beech	1	7	
		Birch	1	7	
		Hemlock	1	7	

Table 8.35 (cont.)

Sample No.	Provinience[a]	Type	Number[b]	% of pollen sum	Remarks
590-9		Hazel	1	7	
		Unident. Conifer	1	7	
		Ash	1	7	
		Arboreal Sum	12	85	
		Ambrosia	1	7	
		Herb. Sum	1	7	
		Unident. Grass	1	7	
		Pollen Sum	14	99	
		Misc:			
		Polypodium (Fern)	1		

[a]Unit; elevation; level

[b]Number of grains counted

[c]Depth below surface (cm)

Table 8.36. Site 22IT590: Comparison of the Vertical Distribution of Cultural Material from Master Block by Concentration Indices

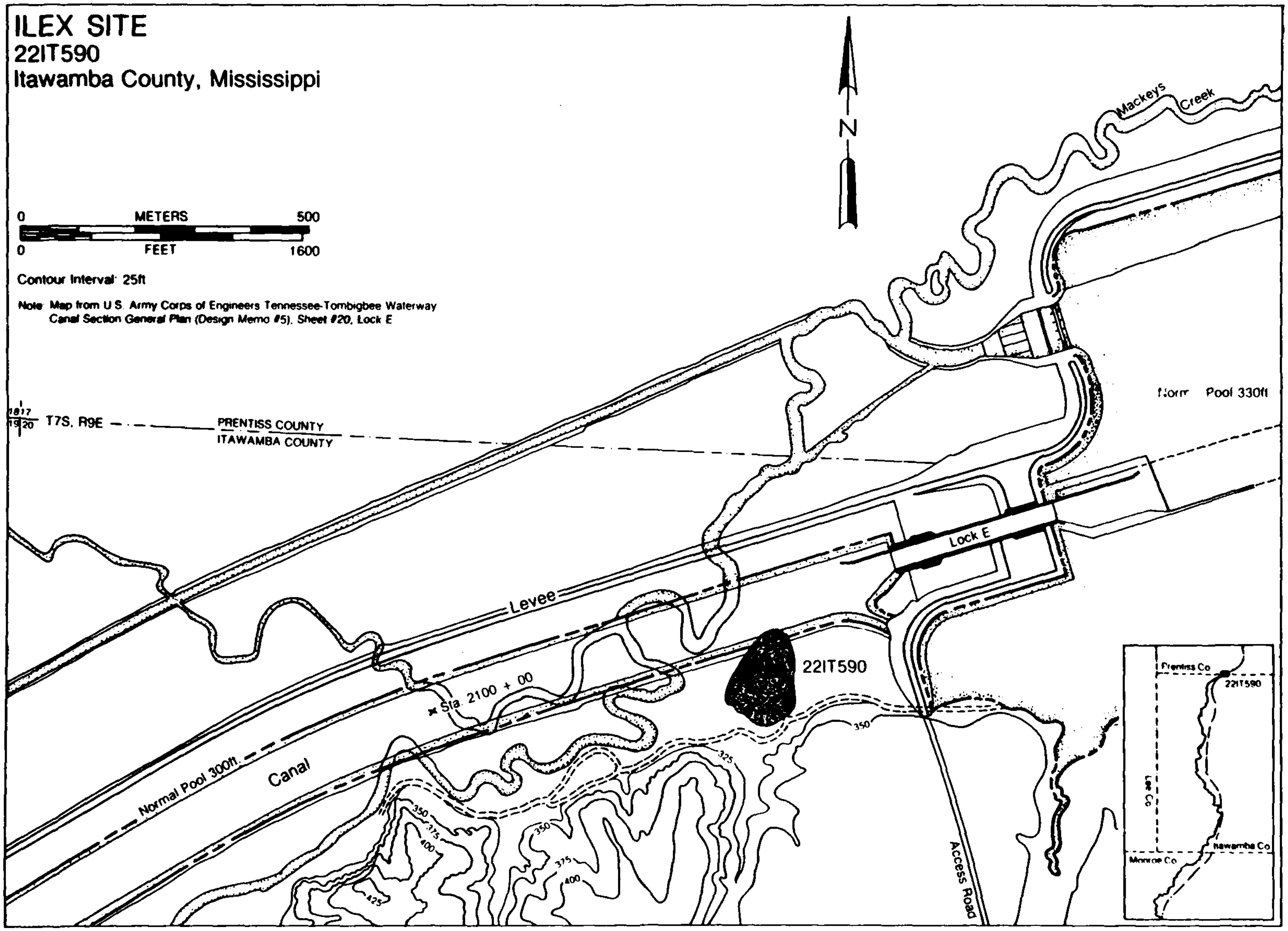
Catagory	Level 1 (16)	Level 2 (16)	Level 3 (16)	Level 4 (16)	Level 5 (67)	Level - 6 (67)	Level 7 (99)	Level 8 (118)	Level 9 (118)	Level 10 (116)	Level 11 (115)	Level 12 (101)
Cores, Preforms, and Biface Blades	1.50	0.69	0.69	0.31	0.34	0.39	0.64	0.66	0.71	0.59	0.15	0.03
Misc Chipped Stone Implements	2.69	15.50	12.06	4.94	5.54	5.97	6.94	6.31	6.02	3.49	1.37	0.49
Ground Stone Artifacts		0.06	0.44	0.31	0.52	0.45	0.65	0.68	0.43	0.17	0.10	0.01
Projectile Point/Knives	1.63	1.63	1.25	1.56	1.10	0.87	0.61	0.45	0.43	0.26	0.17	0.02
Nonutilized Debitage	2]	363.63	184.19	81.75	64.48	88.03	158.63	154.22	125.92	90.37	38.19	11.43
Total Lithic Tools	5.81	17.88	14.44	7.13	7.85	7.67	8.83	8.09	7.59	4.51	1.77	0.54
Total Lithic Materials	5.81	381.50	198.63	88.88	72.33	95.70	167.45	162.31	133.52	94.88	39.97	11.92
Prehistoric Ceramics	44.13	15.38	8.56	3.19	0.55	0.21	0.20	0.13	0.12	0.03	0.01	
Total (count)	49.94	396.88	207.19	92.06	72.88	95.91	167.66	162.44	133.64	94.91	39.97	11.92
Introduced Rock	2]	543.75	776.63	572.06	797.55	907.49	1008.27	705.31	441.08	228.58	74.93	29.71
Misc Fired Material	2]	44.88	28.00	25.69	87.54	57.93	46.48	31.09	16.03	4.63	1.78	0.57
Total (weight)	2]	588.63	804.63	597.75	885.09	965.42	1054.76	736.40	457.12	233.21	76.71	30.29

1] In Level 9 of Master Block, Sublevel 2 was not analyzed for two 1mx1m units.
For the purposes of this chart, these 1mx1m units were counted as completely analyzed.

2] In Level 1 of Master Block, only diagnostic ceramics and lithics were analyzed, therefore there are no entries in the nondiagnostic catagories.

Figure 8.1

Site 22IT590: Map showing the location in the canal section of the waterway


ILEX SITE
22IT590
Itawamba County, Mississippi
N
0 METERS 500
0 FEET 1600
Contour Interval: 25ft
Note: Map from U.S. Army Corps of Engineers Tennessee-Tombigbee Waterway
Canal Section General Plan (Design Memo #5), Sheet #20, Lock E
T7S, R9E
PRENTISS COUNTY
ITAWAMBA COUNTY
Mackeys Creek
Norm Pool 330ft
Lock E
Levee
Sta. 2100 + 00
22IT590
Normal Pool 300ft.
Canal
Access Road
350
325
375
400
425
Prentiss Co
22IT590
Lee Co
Itawamba Co
Monroe Co

8.135

Figure 8.2

The Ilex site at the start of Phase I investigations.
View to the southeast.

8 137

Figure 8.3 upper left

Site 22IT590: The road bisecting the site
View to the north

Figure 8.4 upper right

Site 22IT590: General view of the site showing
Pine Plantation

Figure 8.5 lower left

Site 22IT590: Close-up of site vegetation
View to northwest

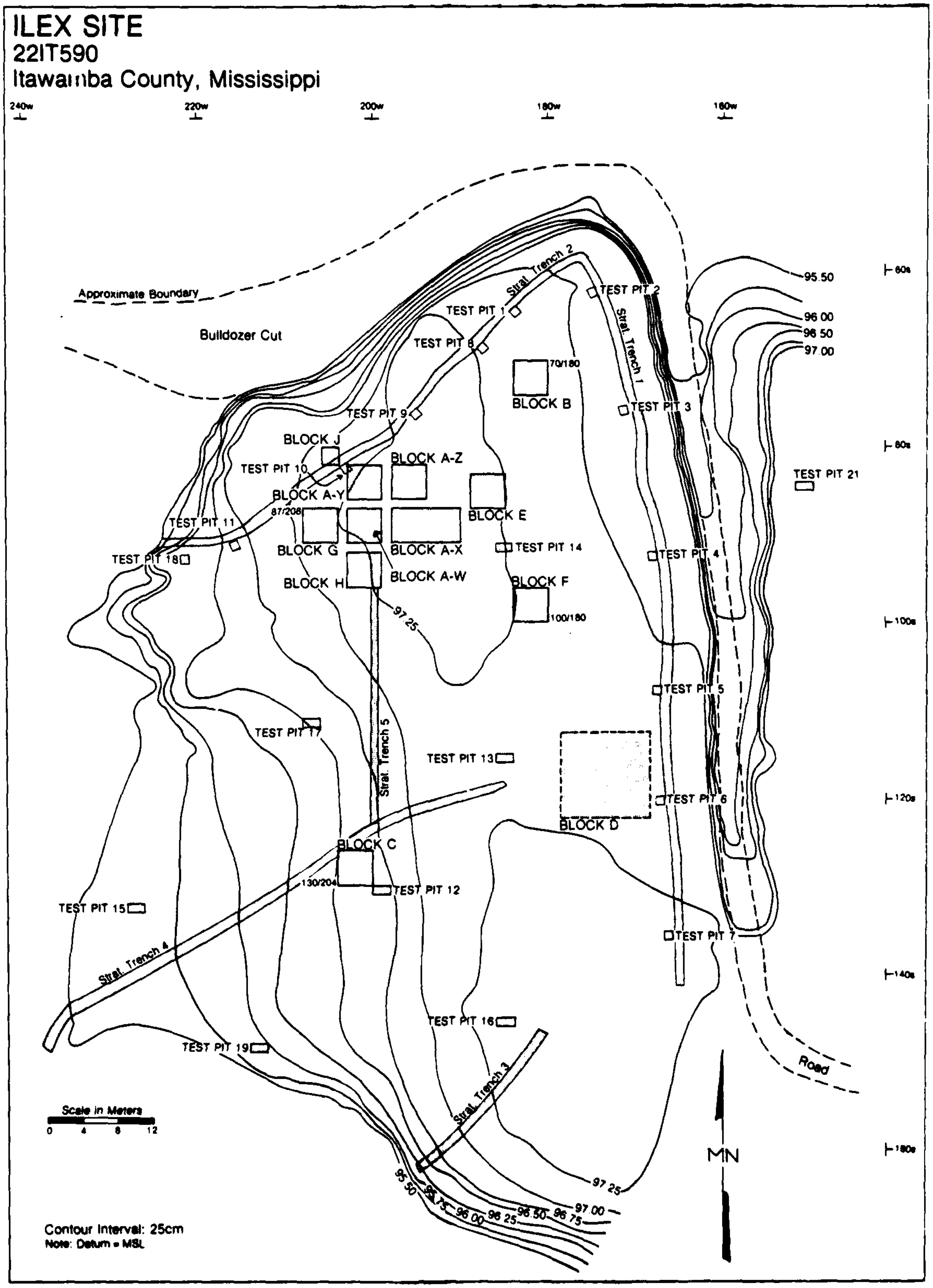
Figure 8.6 lower right

Site 22IT590: Close-up of site vegetation
View to northwest

8,139

Figure 8.7

Site 22IT590: Plat of Phase I excavations



ILEX SITE
22IT590
Itawamba County, Mississippi
240w
220w
200w
180w
160w
Approximate Boundary
Bulldozer Cut
Strat. Trench 2
Strat. Trench 1
TEST PIT 1
TEST PIT 2
TEST PIT 3
TEST PIT 4
TEST PIT 5
TEST PIT 6
TEST PIT 7
TEST PIT 8
TEST PIT 9
TEST PIT 10
TEST PIT 11
TEST PIT 12
TEST PIT 13
TEST PIT 14
TEST PIT 15
TEST PIT 16
TEST PIT 17
TEST PIT 18
TEST PIT 19
TEST PIT 21
BLOCK A-W
BLOCK A-X
BLOCK A-Y
BLOCK A-Z
BLOCK B
BLOCK C
BLOCK D
BLOCK E
BLOCK F
BLOCK G
BLOCK H
BLOCK J
70/180
87/208
100/180
130/204
Strat. Trench 5
Strat. Trench 4
Strat. Trench 3
Road
95.50
96.00
96.50
97.00
97.25
95.75
96.25
96.75
60s
80s
100s
120s
140s
160s
MN
Scale in Meters
0 4 8 12
Contour Interval: 25cm
Note: Datum = MSL

8.141

Figure 8.8

Site 22IT590: Mechanical stripping of the Block D excavation unit.

Figure 8.9

Site 22IT590: Mechanical removal of the upper portion of the cultural deposit in the Master Block excavation area

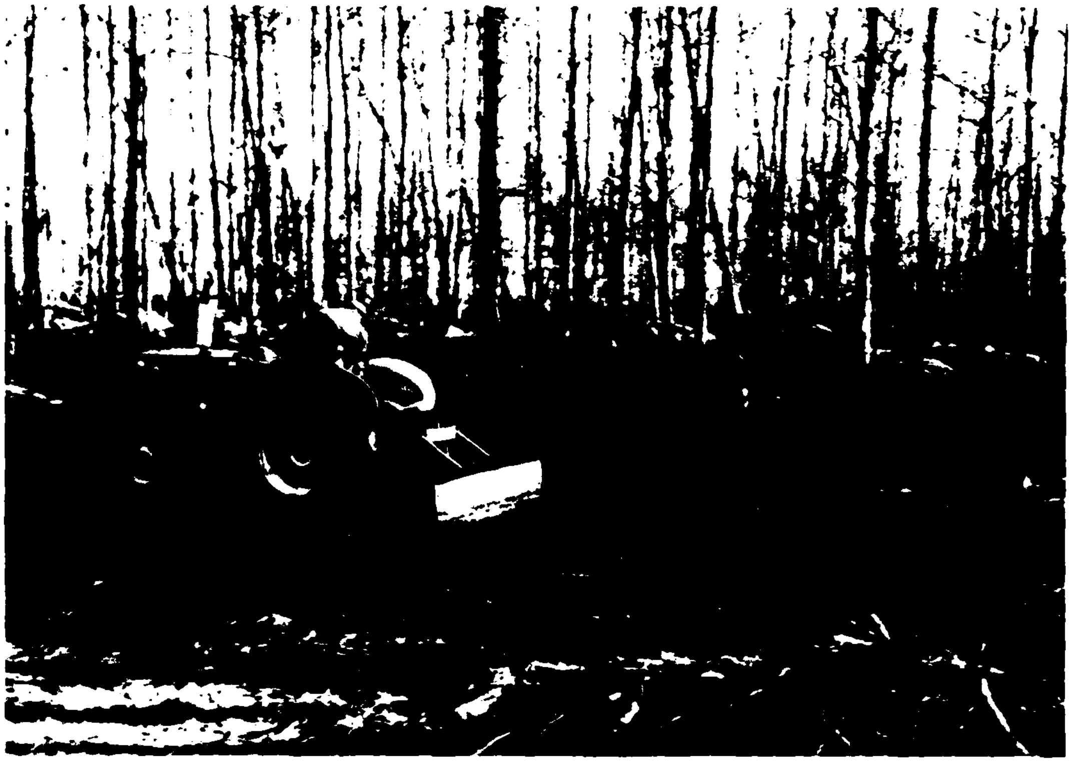
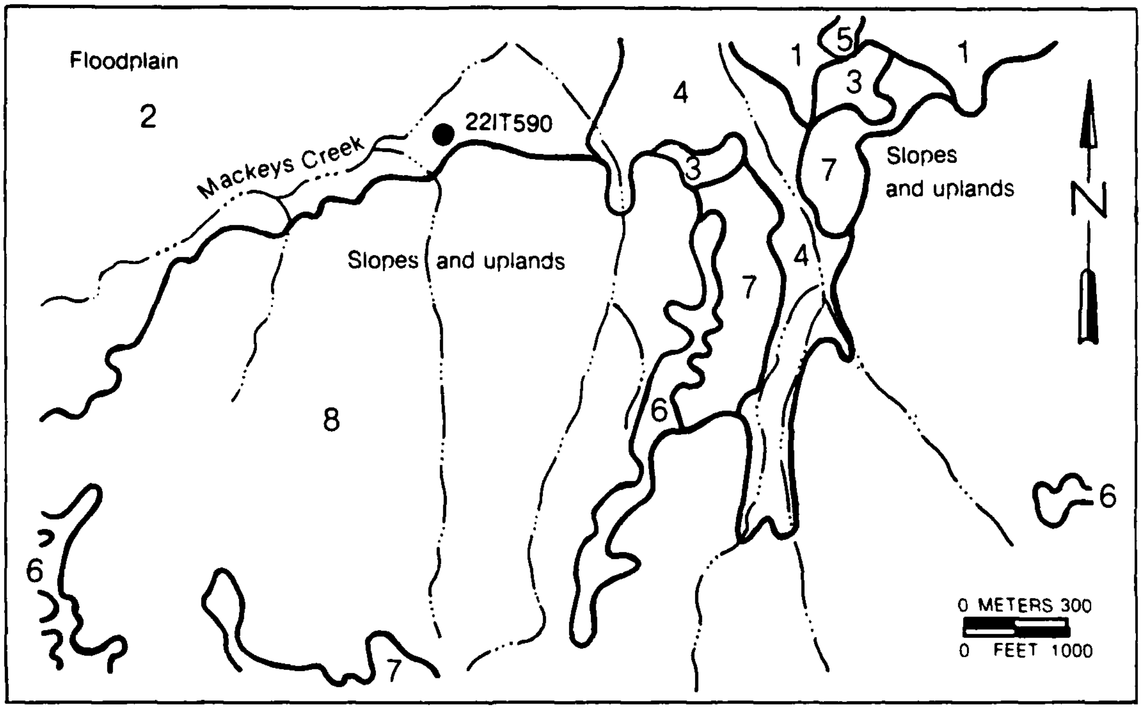


Figure 8.10

Site 22IT590: Soil map of site and vicinity



SOIL LEGEND

SYMBOL	NAME
1	Harleston fine sandy loam
2	Kirkville-Mantachie
3	Lexington silt loam, 2 to 5 percent
4	Mantachie loam
5	Mathiston silt loam
6	Smithdale fine sandy loam, 5 to 8 percent
7	Smithdale fine sandy loam, 8 to 17 percent
8	Smithdale association, hilly

8.195

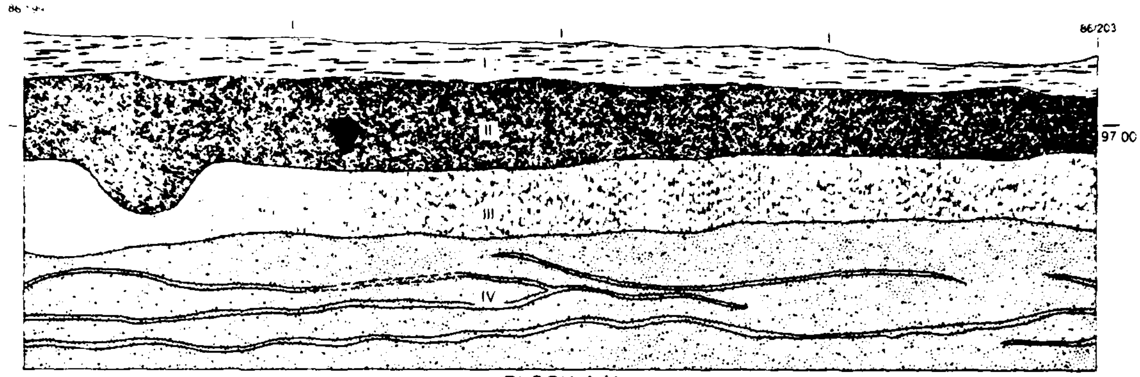
Figure 8.11

Site 22IT590: Stratigraphic profile, Block A-Z

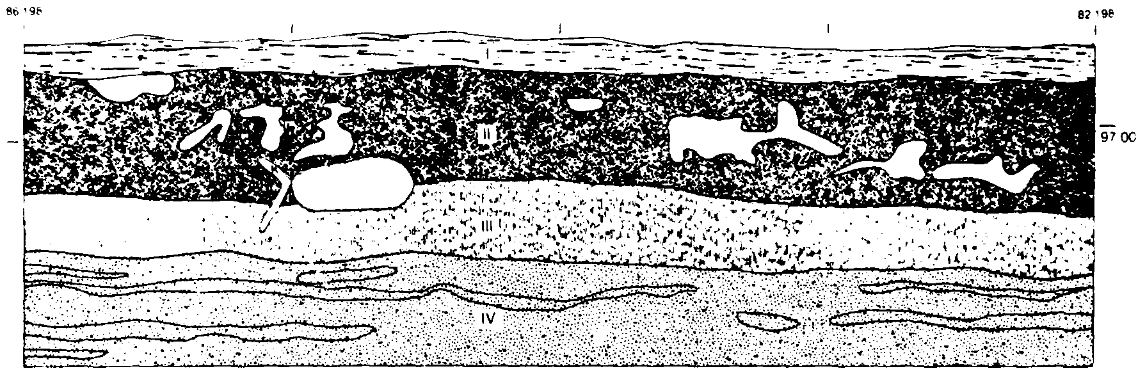

PLOWZONE
CERAMIC HORIZON
BENTON
EARLY MIDDLE ARCHAIC
EARLY ARCHAIC
ARGILLIC BANDS
STERILE
HISTORIC DISTURBANCE
F 19
FIRED CLAY
F 22

Figure 8.12

Site 22IT590: Stratigraphic profiles



BLOCK A-Y
South Profile



BLOCK A-Z
West Profile

22IT590

BLOCK A-Y (82s/199w)
BLOCK A-Z (82s/194w)

- I. Plowzone, very dark brown (10YR 2/2) loamy sand.
- II. Dark reddish brown (5YR 3/2) sandy loam.
- III. Dark reddish brown (5YR 2.5/2) sandy loam mottled with very dark grayish brown (10YR 3/2).
- IV. Dark reddish brown (5YR 3/2) loamy sand mottled with yellowish brown (10YR 5/4). Lamellae are dark brown (7.5YR 3/4) sandy loam.

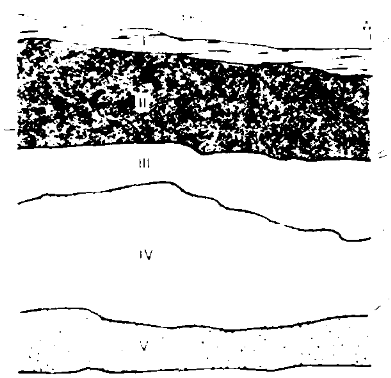
Mottled lense
Fired aggregate
K Krotovina

cm
0 100

Figure 8.13

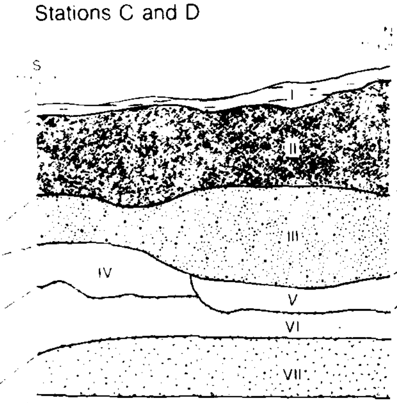
Site 22IT590: Correlation of representative stratigraphic profiles

STRATIGRAPHIC TRENCH 4
Near Block C



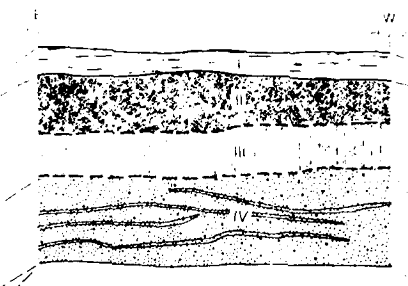
I Plowzone dark brown (7.5YR 3/2) loamy sand
II Dark brown (7.5YR 3/4) sandy loam
III Strong brown (7.5YR 5/8) sandy loam
IV Brownish yellow (10YR 6/8) sandy loam mottled with strong brown (7.5YR 5/8)
V Light yellowish brown (10YR 6/4) loamy sand mottled with strong brown (7.5YR 5/6)

STRATIGRAPHIC TRENCH 5
Stations C and D



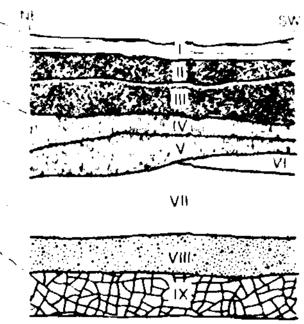
I Plowzone dark brown (7.5YR 3/2) loamy sand
II Dark brown (7.5YR 3/2) sandy loam
III Dark yellowish brown (10YR 4/6) sandy loam
IV Dark brown (7.5YR 3/4) loamy sand
V Strong brown (10YR 5/8) sandy loam
VI Yellowish brown (10YR 5/8) sandy loam with reticulate mottles
VII Brownish yellow (10YR 6/6) loamy sand

BLOCK A-Y (86s/200w)
South Wall



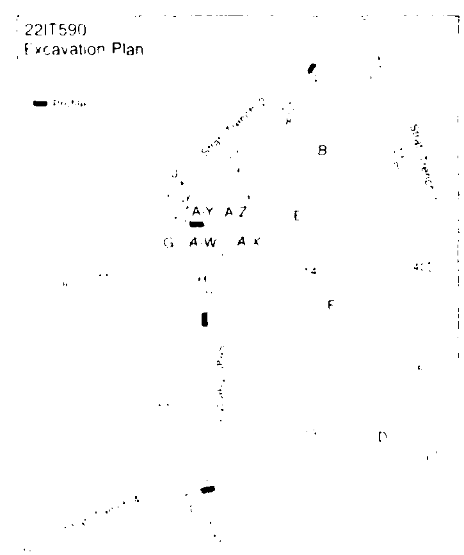
I Plowzone, very dark brown (10YR 2/2) loamy sand
II Dark reddish brown (5YR 2/2) sandy loam
III Dark reddish brown (5YR 2.5/2) sandy loam
IV Dark reddish brown (5YR 3/2) sandy loam. Lamellae are dark brown (7.5YR 3/4) sandy loam

TEST PIT#1
In Stratigraphic Trench 2



I Plowzone very dark brown (10YR 2/2) loamy sand mottled with dark brown (10YR 3/3)
II Dark yellowish brown (10YR 3/4) sandy loam mottled with yellowish brown (10YR 5/4)
III Very dark brown (10YR 2/2) sandy loam mottled with dark brown (7.5YR 3/4)
IV Dark reddish brown (5YR 2.5/2) sandy loam mottled with dark brown (7.5YR 3/4)
V Dark reddish brown (5YR 2.5/2) sandy loam with increased charcoal (flecks)
VI Dark reddish brown (5YR 2.5/2) sandy loam (more compact)
VII Brown (7.5YR 5/4) sandy loam mottled with dark yellowish brown (10YR 4/4)
VIII Brown (7.5YR 5/4) loamy sand
IX Strong brown (7.5YR 4/6) loam mottled with brown (7.5YR 5/2)

22IT590
Excavation Plan



22IT590
Correlation of Stratigraphic Profiles

8.151

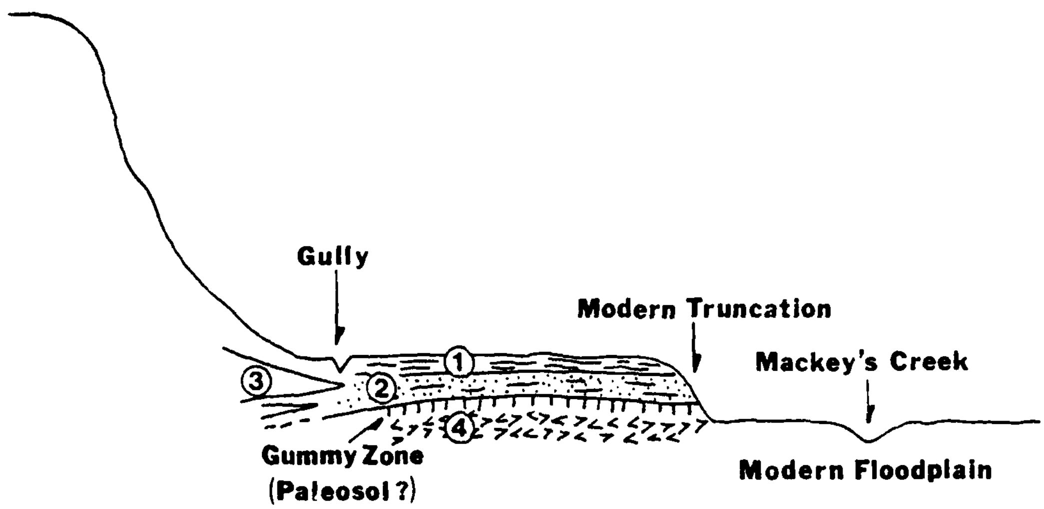
Figure 8.14

Site 22IT590: Stratigraphic profile, Stratigraphic Trench 5

22IT590
STRAT. TRENCH 5
WEST PROFILE
SAMPLE STATION
12 FEB 81

Figure 8.15

Site 22IT590: Schematic cross-section showing major depositional units



① Cultural Midden

② Fluvial Sands With Lamellae

③ Interfingering Colluvium

④ Terrace Remnent (Pleistocene?)

Figure 8.16

Site 22IT590: Pit Feature 55

Figure 8.17

Site 22IT590: Pit Feature 37


22 IT590
FEATURE 55
CP 85.60 - 187.45
ELEV 96.20
PROFILE
BLOCK E 11 FEB 81


22 IT 590
FEATURE 37
CP 89.50 - 191.50
ELEV. - 96.30
POST EXCAVATION
BLOCK A 26 JAN 81

Figure 8.18

Site 22IT590: Fired aggregate, Feature 24

Figure 8.19

Site 22IT590: Rock cluster, Feature 29

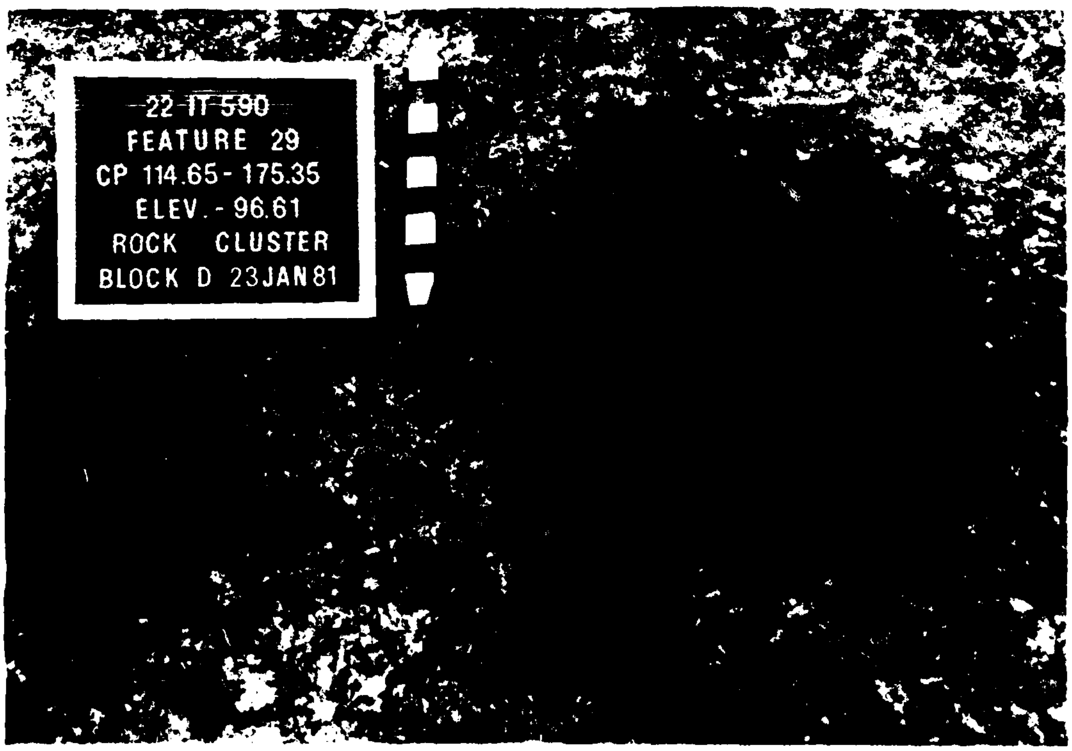

22-IT-590
FEATURE 29
CP 114.65 - 175.35
ELEV. - 96.61
ROCK CLUSTER
BLOCK D 23JAN81

Figure 8.20

Site 22IT590: Prepared area, Feature 22

Figure 8.21

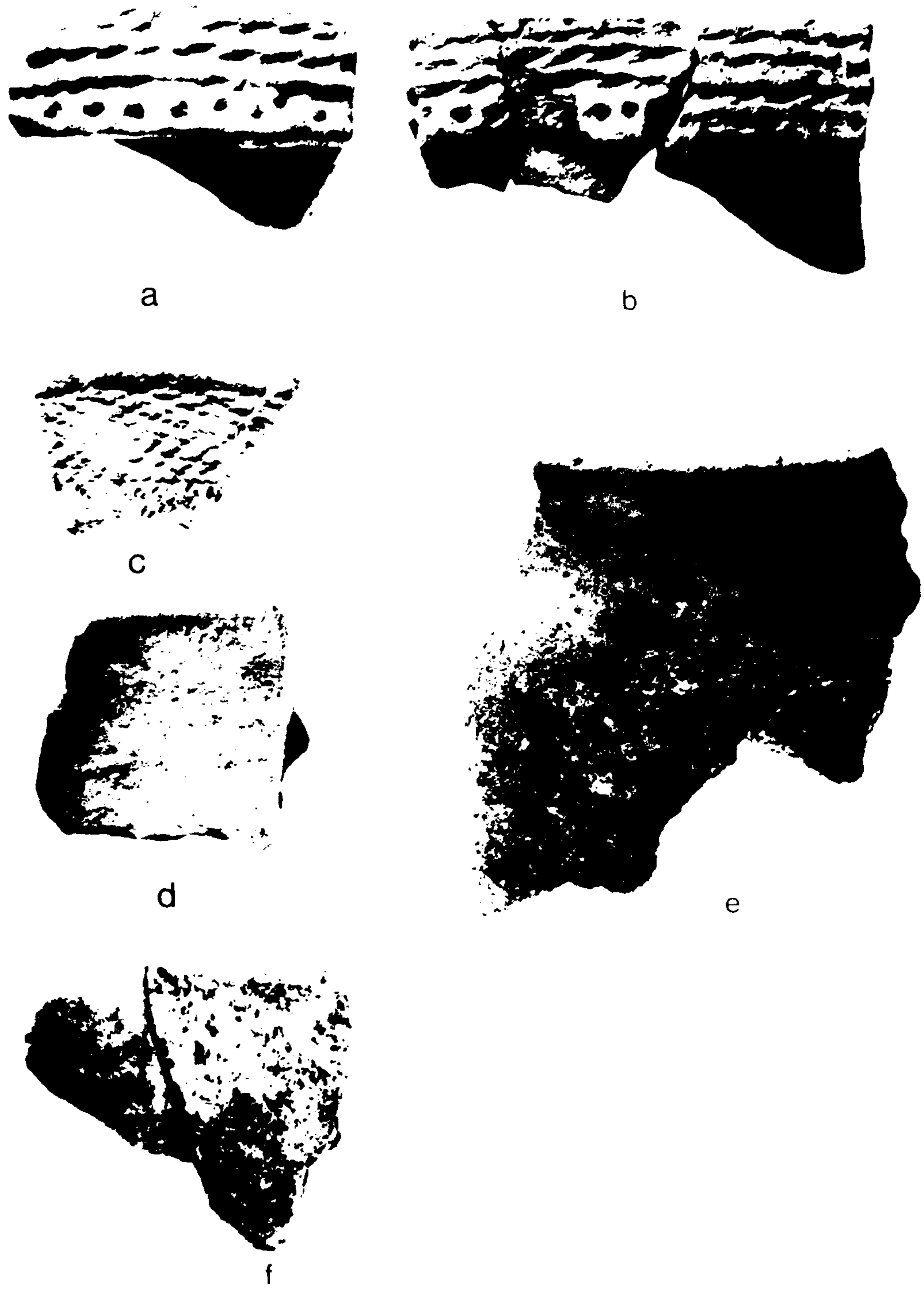
Site 22IT590: Bone cluster, Feature 64

8.16.1

Figure 8.22

Site 22IT590: Selected grog tempered ceramics

a. Mulberry Creek Cord Marked 593-4
b. Mulberry Creek Cord Marked 254-2/180-2
c. Mulberry Creek Cord Marked 881-1
d. Baytown Plain 157-3
e. Baytown Plain 136-5
f. Baytown Plain 882-7



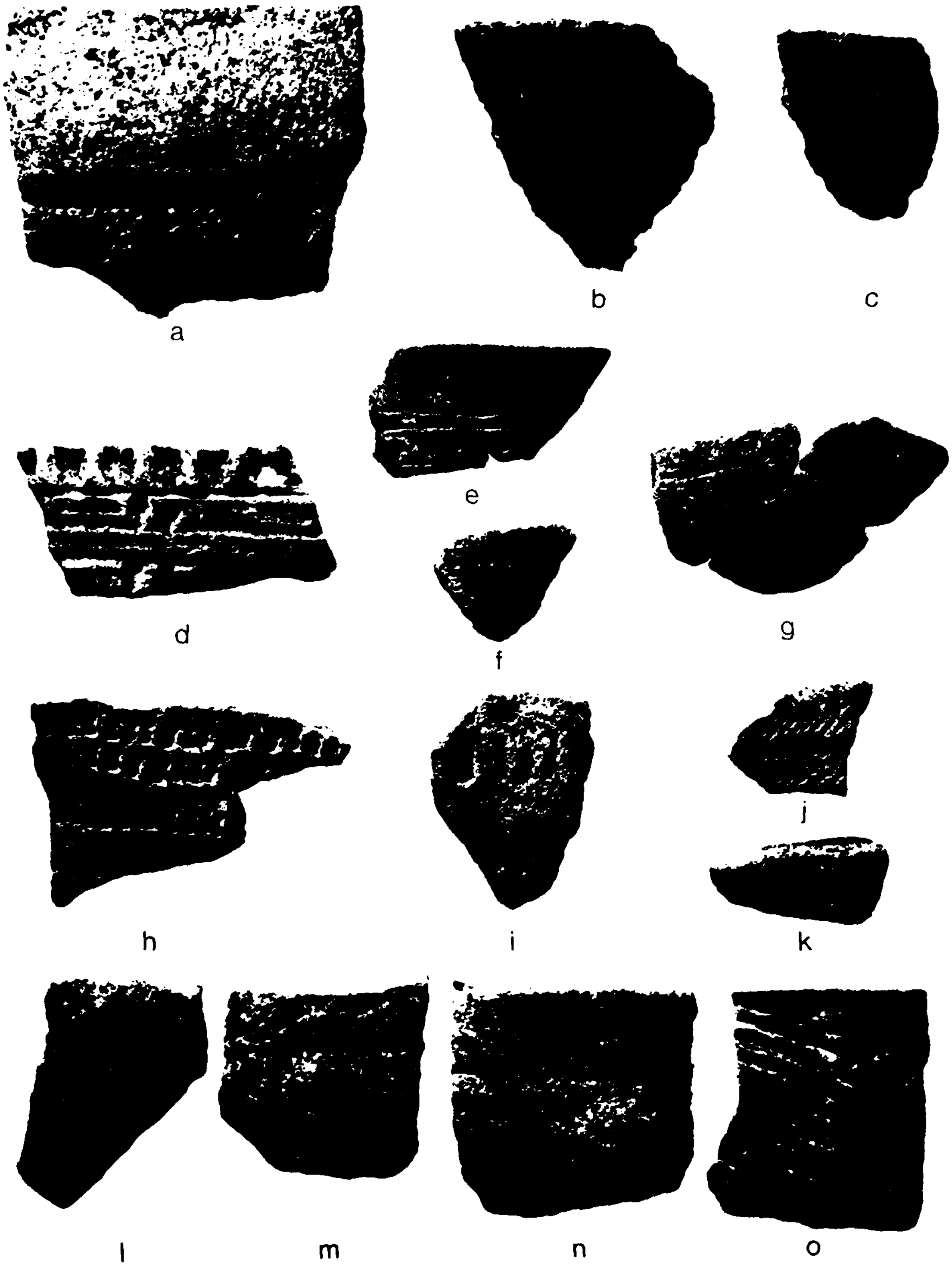
8, 163

Figure 8.23

Site 22IT590: Selected Limestone and Sand Tempered Ceramics

Limestone Tempered:
a. Flint River Cord Marked (1597-8)
b. Mulberry Creek Plain (1597-6)
c. Mulberry Creek Plain (1597-5)

Sand Tempered:
d. Alexander Incisded/Columbus Punctate (329-2)
e. Alexander Incised/Columbus Punctate (686-35)
f. Alexander Incised/Columbus Punctate (319-8)
g. Alexander Incised/Columbus Punctate (393-29)
h. Sand Other (720-96)
i. Sand Other (2978-2)
j. Sand Other (657-176)
k. Sand Other (114-50)
l. Furrs Cord Marked (555-29)
m. Furrs Cord Marked (118-24)
n. Furrs Cord Marked (319-43)
o. Furrs Cord Marked (1606-1)

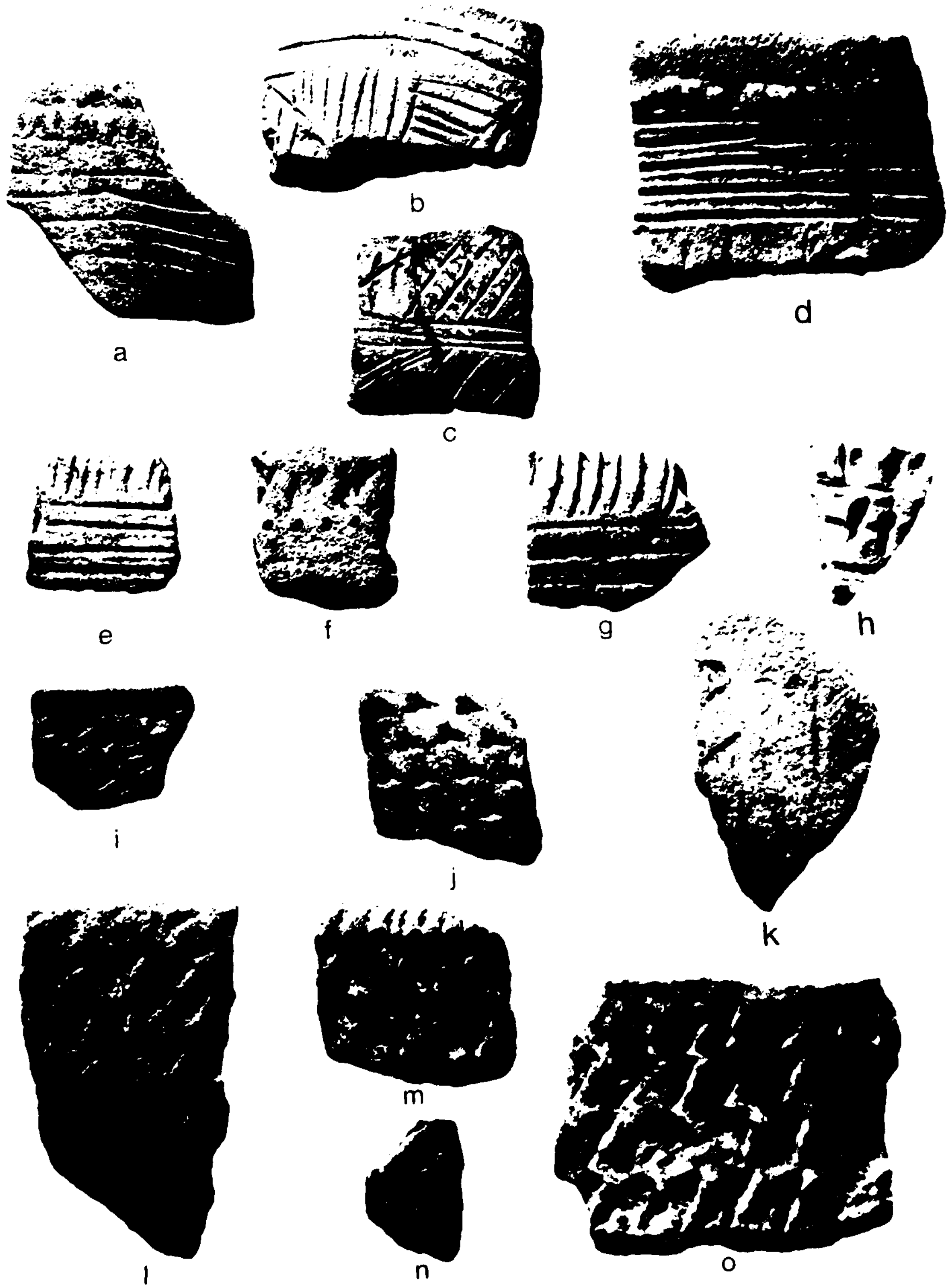


8.165

Figure 8.24

Site 22IT590: Selected sand tempered ceramics

a. Alexander Incised (372-4)
b. Alexander Incised (687-8)
c. Alexander Incised (1597-19)
d. Alexander Incised (736-4)
e. Alexander Incised (399-14)
f. Alexander Incised (733-76
g. Alexander Incised (709-4)
h. Alexander Incised (655-32)
i. Columbus Punctate (894-3)
j. Columbus Punctate (689-28)
k. Smithsonia Zone Stamped (338-12)
l. Alexander Pinched (686-34)
m. Alexander Pinched (319-21)
n. Alexander Pinched (724-2)
o. Alexander Pinched (1597-24)



8,167

Figure 8.25

Site 22IT590: Selected sand tempered ceramics

a. Satillo Fabric Marked (106-5)
b. Satillo Fabric Marked (865-12)
c. Satillo Fabric Marked (1597-131)
d. Satillo Fabric Marked (1597-130)

a

b

c

d

8.169

Figure 8.26

Site 22IT590: Selected Sand Tempered Ceramics

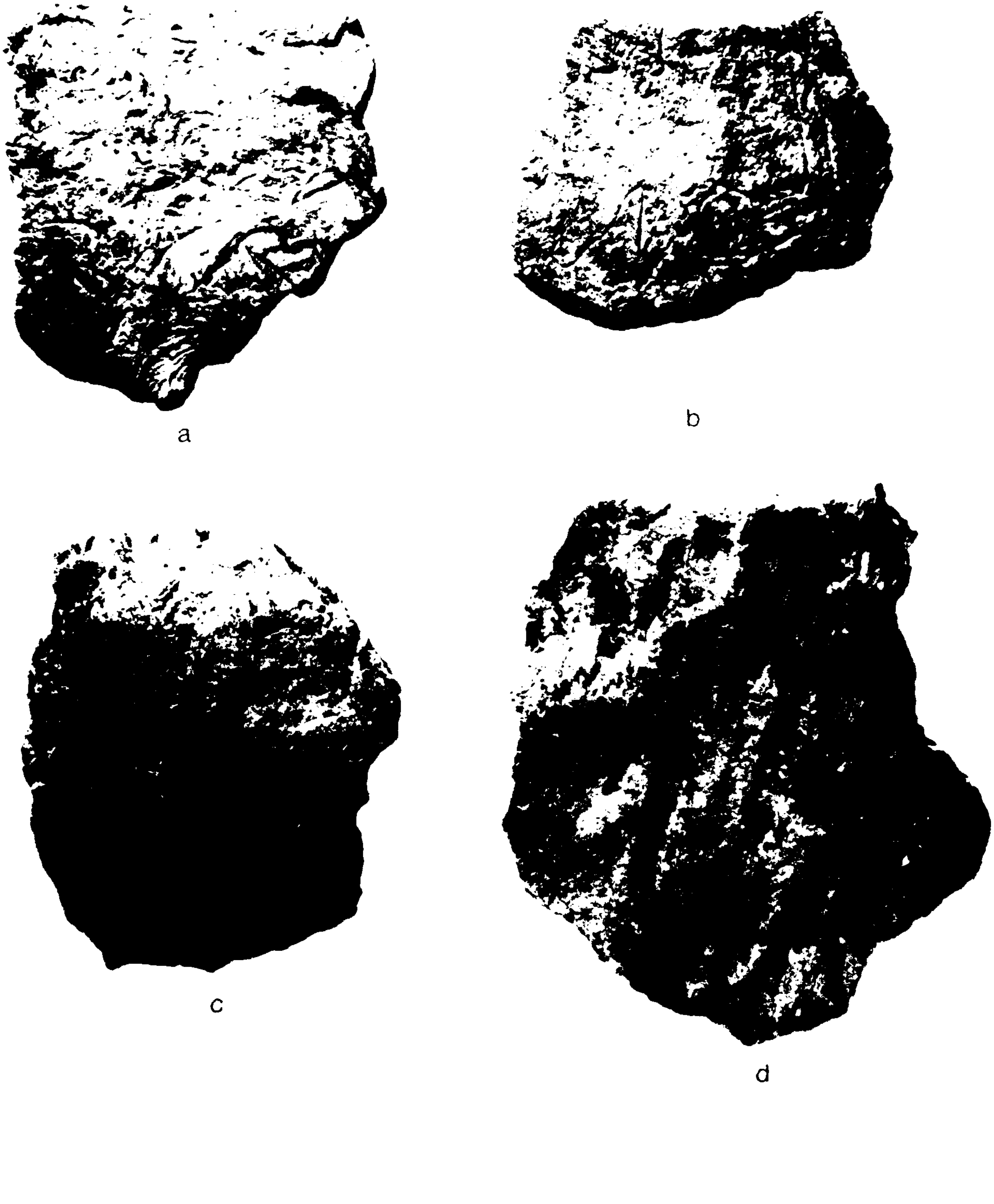
a. Podal Support (586-26)
b. Podal Support (1597-74)
c. Podal Support (725-3)
d. Podal Support (1597-75)
e. Pipe (554-143)
f. Ear Spool (2835A-42)

8.171

Figure 8.27

Site 22IT590: Selected Fiber Tempred Ceramics

a. Wheeler Plain (3270-8)
b. Wheeler Plain (1597-33)
c. Wheeler Plain (3270-6)
d. Wheeler Plain (3270-11)



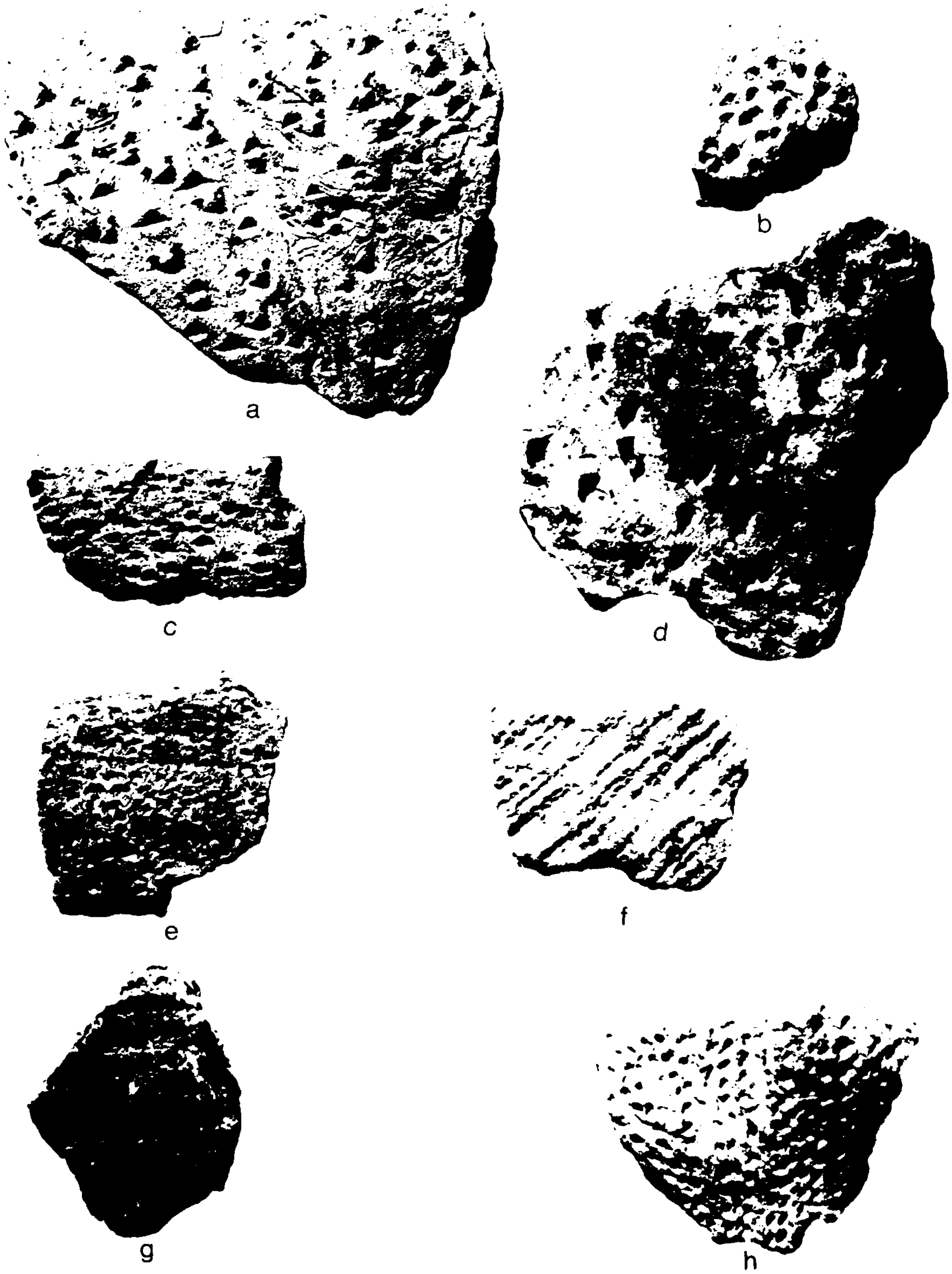
a b c d

8.173

Figure 8.28

Site 22IT590: Selected Fiber Tempered Ceramics

a. Wheeler Punctate (3270-16)
b. Wheeler Punctate (688-83)
c. Wheeler Punctate (735-74)
d. Wheeler Punctate (3270-12)
e. Wheeler Dentate Stamped (1597-188)
f. Wheeler Dentate Stamped (709-15)
g. Wheeler Dentate Stamped (1597-182)
h. Wheeler Dentate Stamped (1597-181)

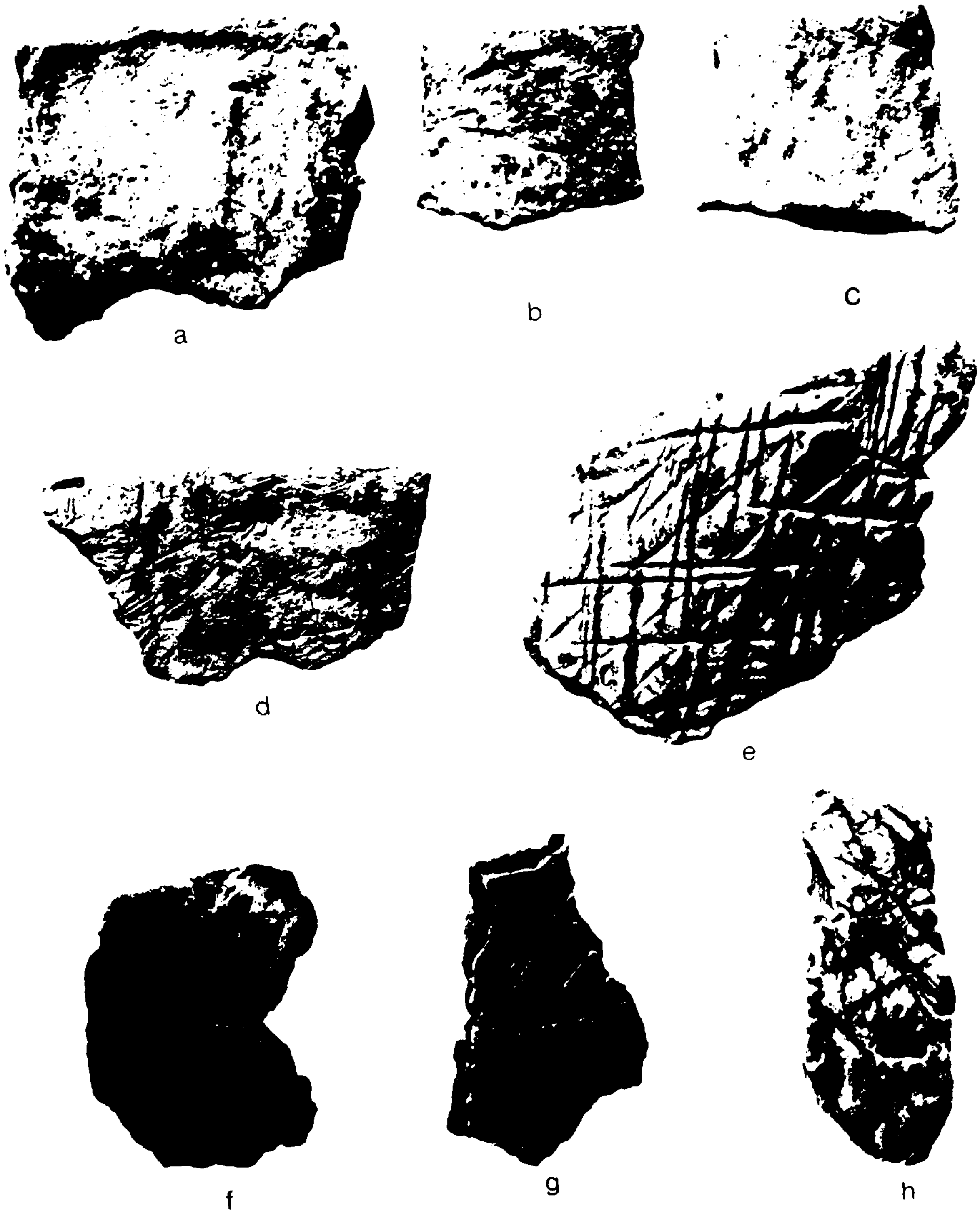


9.175

Figure 8.29

Site 22IT590: Selected Fiber Tempered Ceramics

a. Wheeler Plain (1597-177)
b. Wheeler Plain (149-26)
c. Wheeler Plain (338-33)
d. Wheeler Plain (3270-14)
e. Wheeler Simple Stamped (3270-18)
f. Wheeler Simple Stamped (707-35)
g. Wheeler Simple Stamped (709-34)
h. Wheeler Simple Stamped (3270-17)



8.177

Figure 8.30

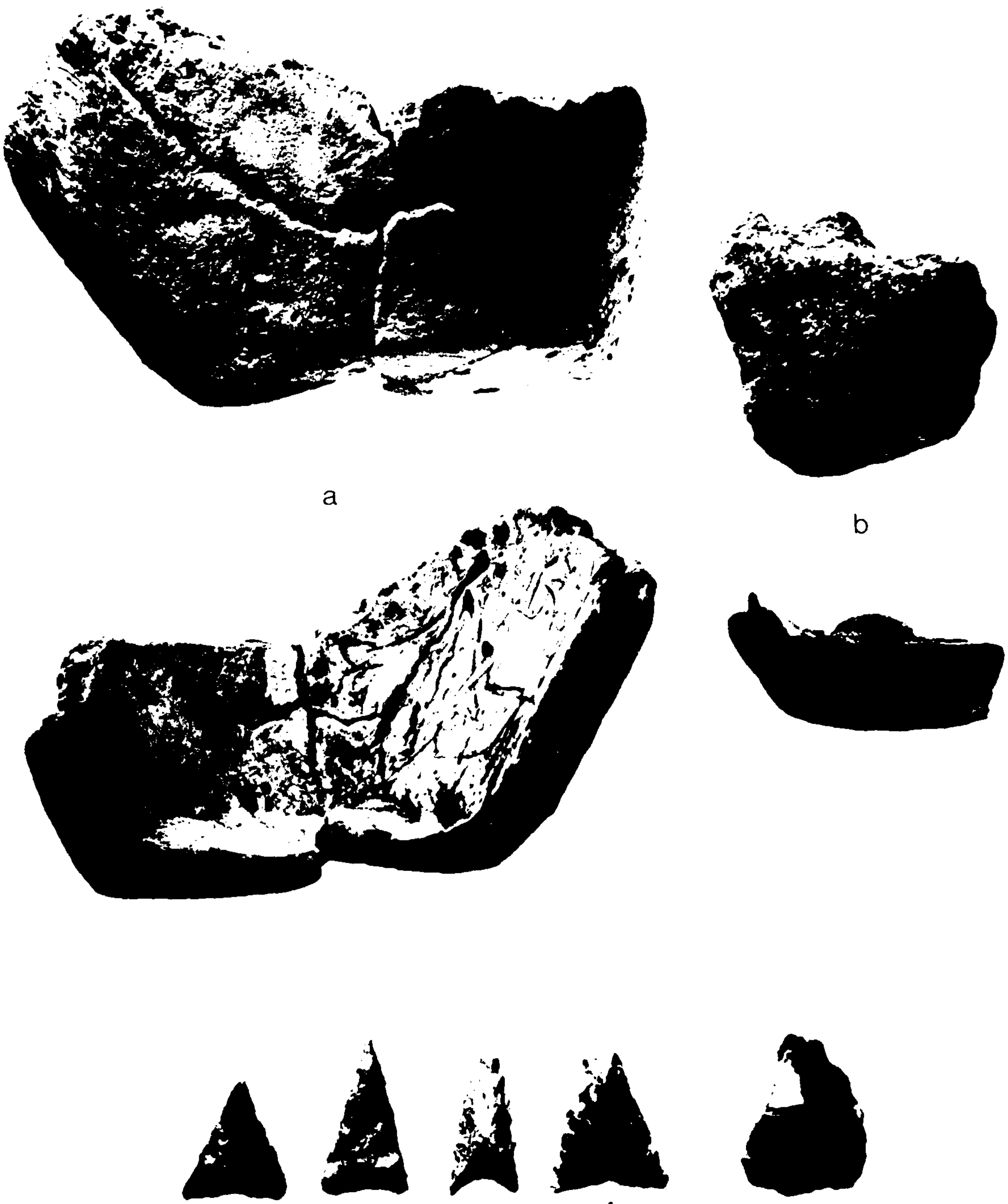
Site 22IT590: Selected Fiber Tempered Ceramics and Projectile Point/Knives

Ceramics

a. Wheeler Plain Base (3270-10)
b. Wheeler Plain Base (1597-178)

Projectile Point/Knives

c. Mississippian/Woodland Triangular (615-14)
d. Mississippian/Woodland Triangular (857-100)
e. Mississippian/Woodland Triangular (118-63)
f. Mississippian/Woodland Triangular (360-65)
g. Small Unfinished Triangular (657-205)

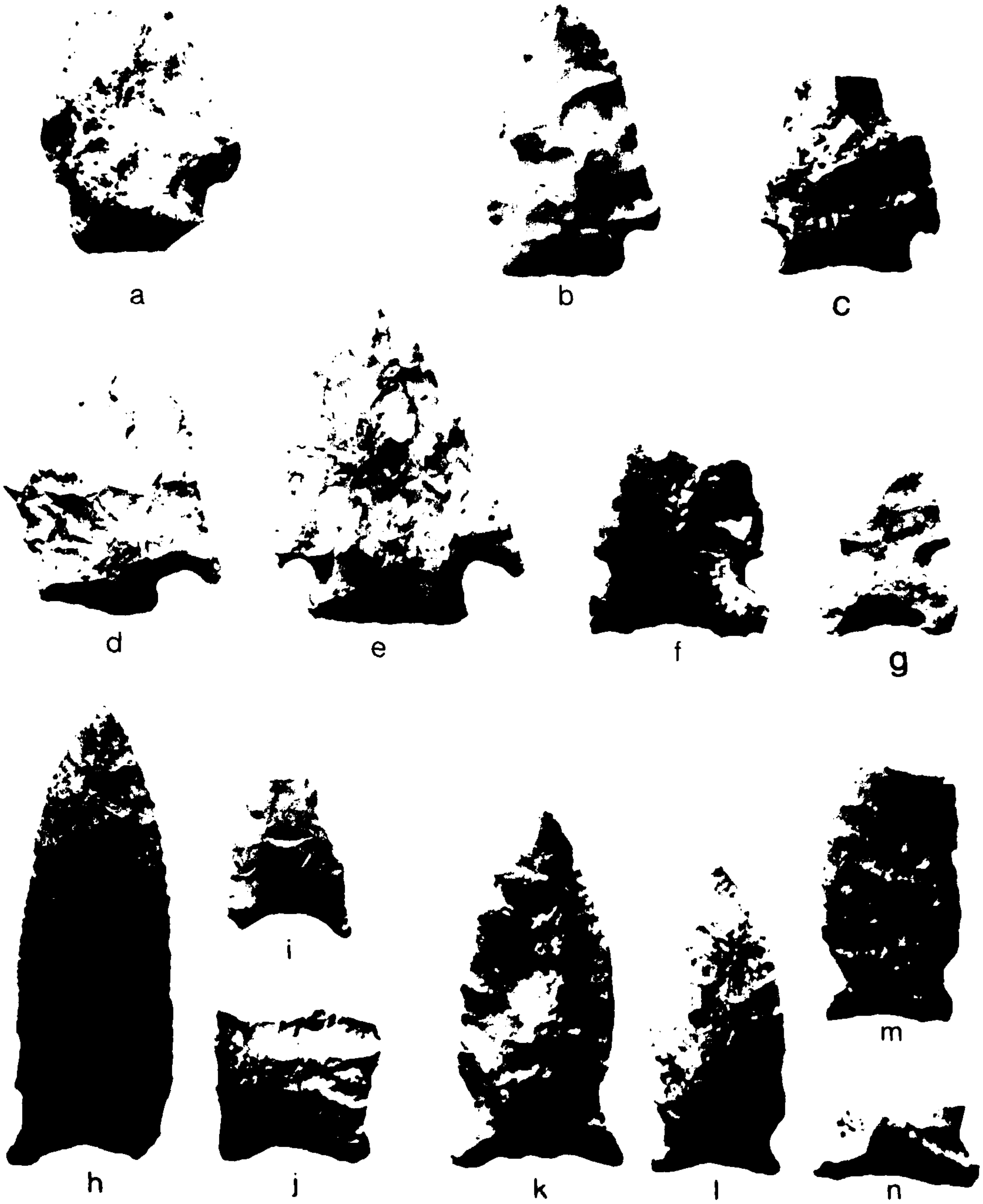


8.179

Figure 8.31

Site 22IT590: Selected Projectile Point/Knives

a. Vaughn (2979-51)
b. Beachum (744-1)
c. Beachum (752-8)
d. Cypress Creek (4219-1)
e. Cypress Creek (2061-1)
f. Big Sandy (2407)
g. Big Sandy (2272)
h. Dalton (2889)
i. Dalton (2479-1)
j. Dalton (3216-1)
k. Greenbrier (3216-1)
l. Greenbrier (4359-1)
m. Greenbrier (2885-1)
n. Greenbrier (2083-1)

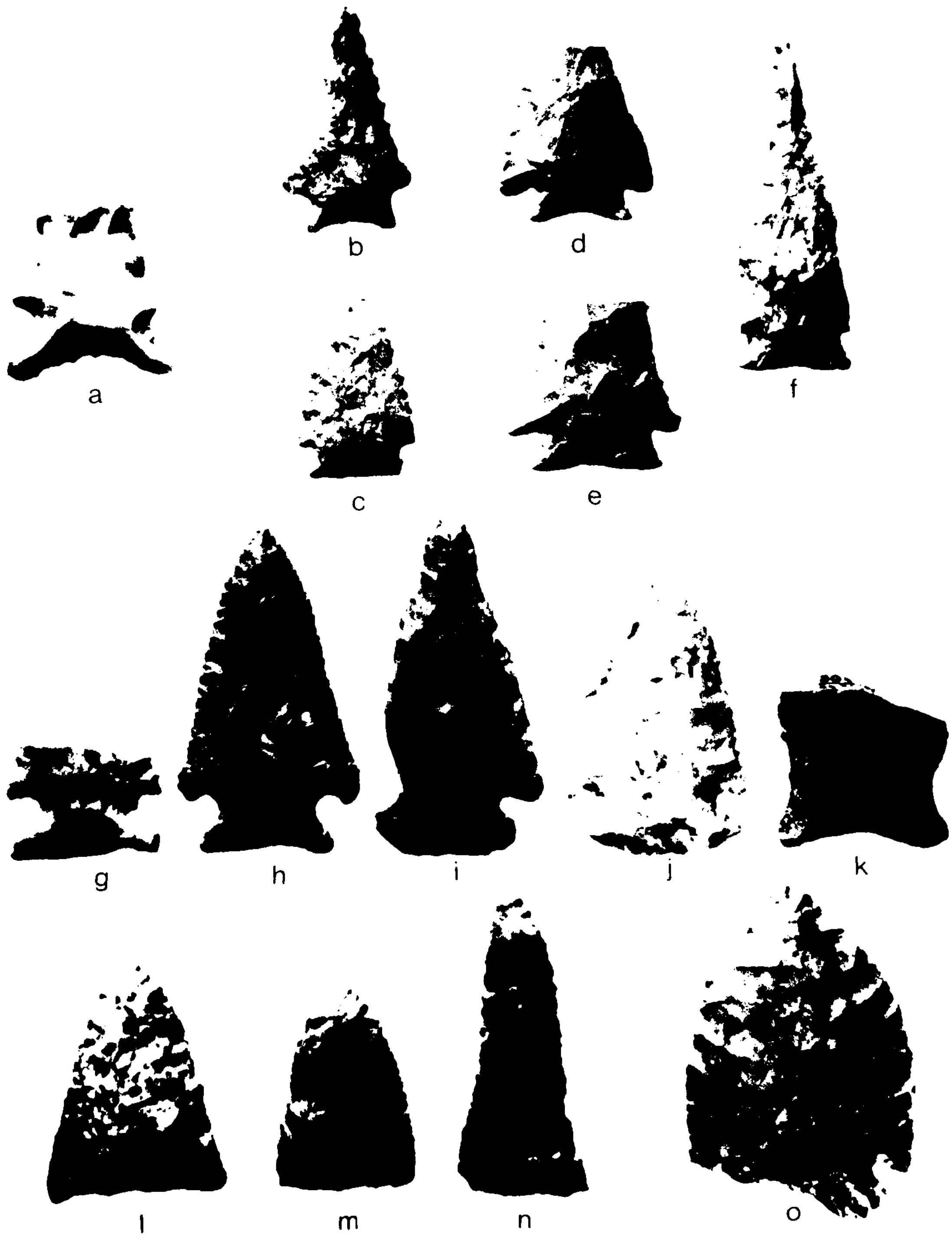


8.181

Figure 8.32

Site 22IT590: Selected Projectile Point/Knives

a. Hardaway (935-1)
b. Kirk, Variant A1 (3700-1)
c. Kirk, Variant A1 (4362-1)
d. Kirk, Variant A1 (1489-1)
e. Kirk, Variant A1 (3055-1)
f. Kirk, Variant A1 (4304-1)
g. Kirk, Variant A2 (1325-1)
h. Kirk, Variant A2 (2883-1)
i. Kirk, Variant B (2902-1)
j. Kirk, Variant B (2060-1)
k. Beaver Lake (3044-1)
l. Residual Triangular (3424-1)
m. Residual Triangular (1632-1)
n. Residual Triangular (2497-1)
o. Plevna (2568-1)



8.183

Figure 8.33

Site 22IT590: Selected Projectile Point/Knives

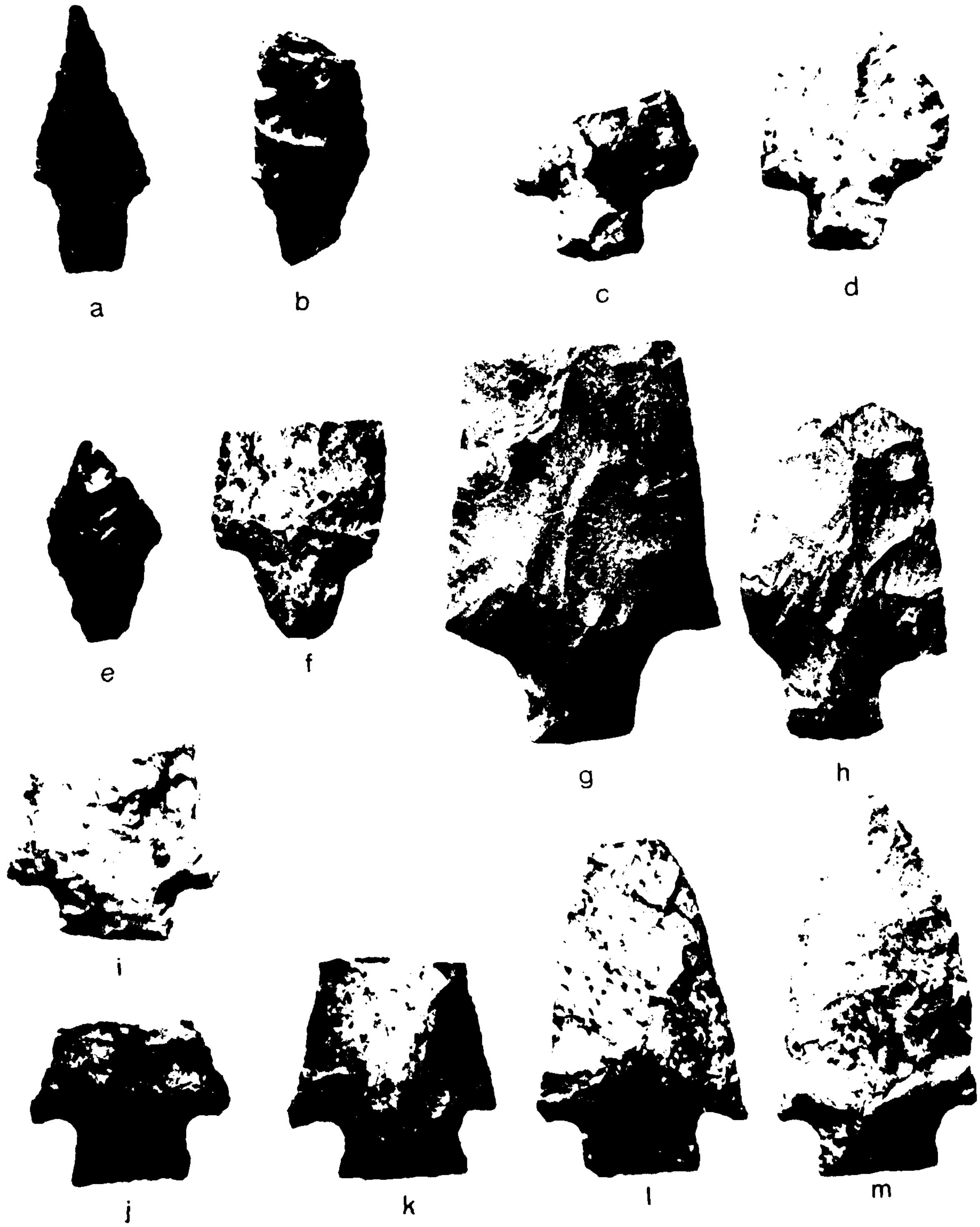
a. Benton, Variant A (752-2)
b. Benton, Variant A (4283-1)
c. Benton, Variant A (890-1)
d. Benton, Variant B (1597-211)
e. Benton, Variant B (4123-1)
f. Benton, Variant C (1999-1)
g. Benton, Variant C (800-1)
h. Benton, Variant D (778-1)
i. Benton, Variant D (2897-1)
j. Benton, Variant E (1992)
k. Benton, Variant E (807-1)
l. Benton, Variant F (3509-1)
m. Benton, Variant F (3280-1)

4.185

Figure 8.34

Site 22IT590: Selected Projectile Point/Knives

a. Mud Creek (686-156)
b. Tombigbee Stemmed (1591-329)
c. Cotaco Creek (655-147)
d. Cotaco Creek (746-1)
e. Gary (657-200)
f. Gary (140-25)
g. Ledbetter/Pickwick (520-10)
h. Ledbetter/Pickwick (1597-267)
i. McIntire (2794-1)
j. McIntire (1989-1)
k. McIntire (4120-1)
l. McIntire (838-1)
m. McIntire (3275-1)

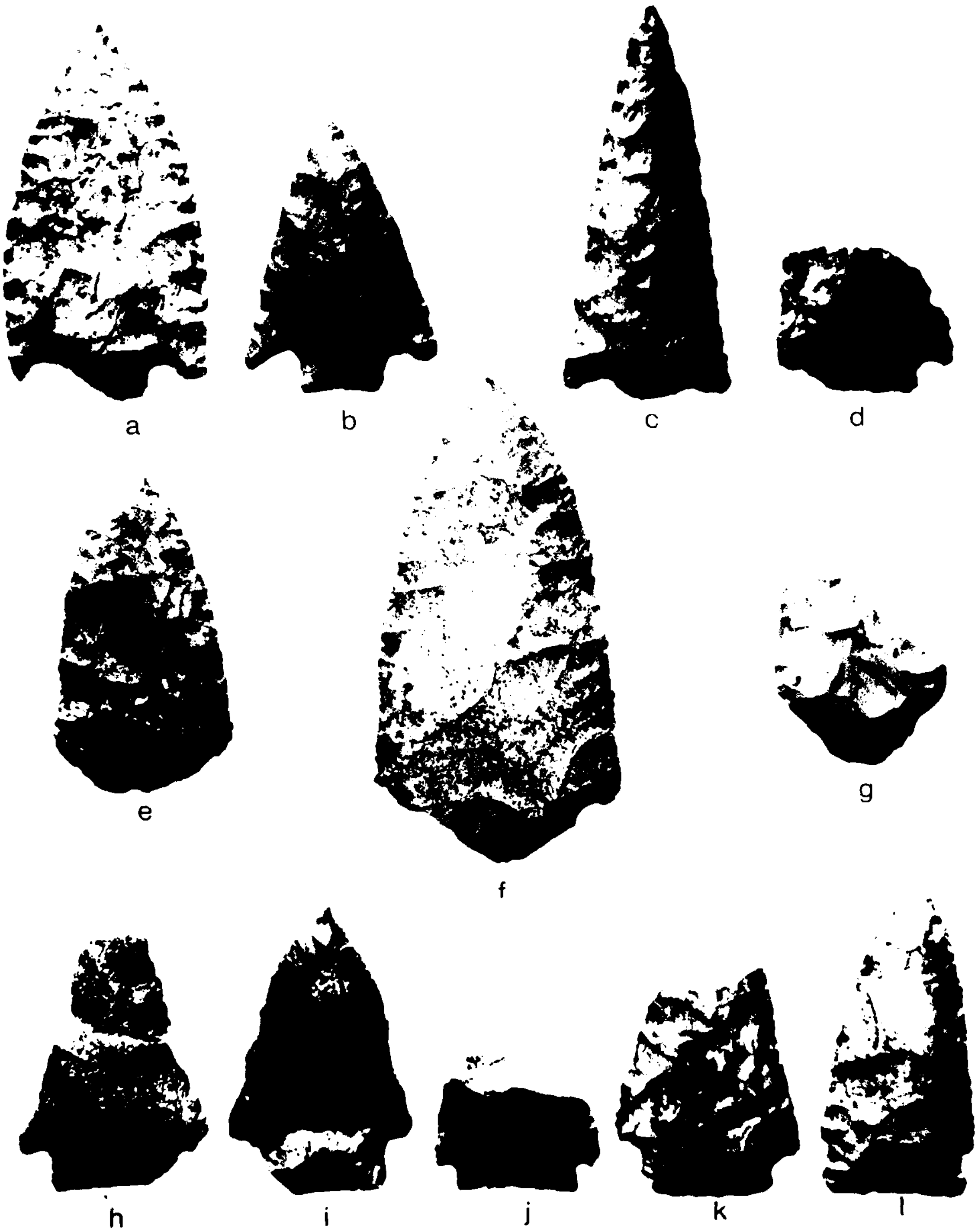


8.187

Figure 8.35

Site 22IT590: Selected Projectile Point/Knives

a. Eva, Variant A (2617-1)
b. Eva, Variant A (2743-1)
c. Eva, Variant B (4300-1)
d. Eva, Variant B (817-1)
e. Morrow Mountain (1597-299)
f. Morrow Mountain (1718-4)
g. Morrow Mountain (130-27)
h. Sykes-White Springs, Variant A (3266-1)
i. Sykes-White Springs, Variant A (858-1)
j. Sykes-White Springs, Variant A (4357-1)
k. Sykes-White Springs, Variant B (2744-1)
l. Sykes-White Springs, Variant B (797-2)

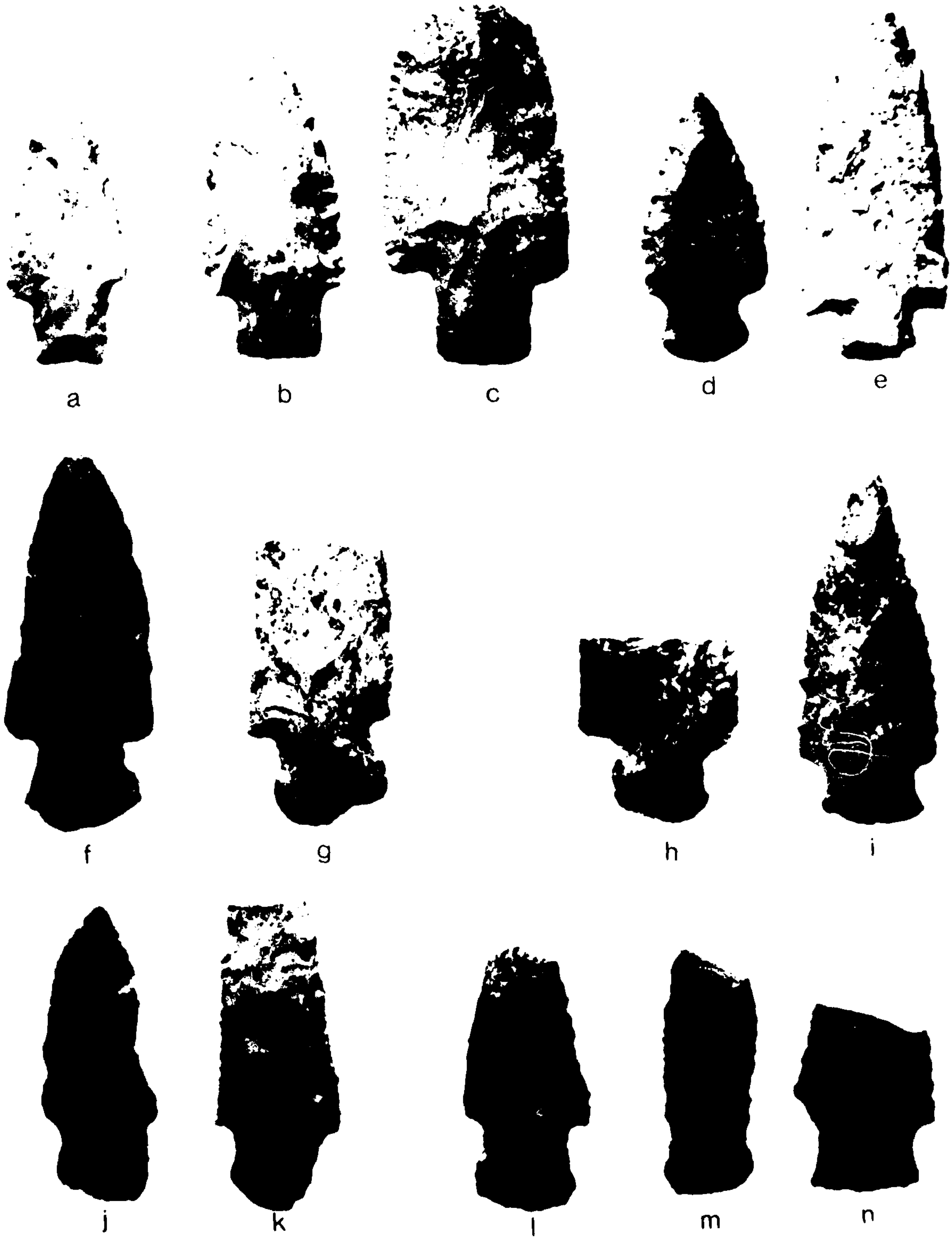


8.189

Figure 8.36

Site 22IT590: Selected Projectile Point/Knives

a. Little Bear Creek/Flint Creek, Variant A (720-151)
b. Little Bear Creek/Flint Creek, Variant B (654-165)
c. Little Bear Creek/ Flint Creek, Variant B (1597-290)
d. Little Bear Creek/Flint Creek, Variant C (1597-234)
e. Little Bear Creek/Flint Creek, Variant C (887-1)
f. Little Bear Creek/Flint Creek, Variant D (1597-241)
g. Little Bear Creek/Flint Creek, Variant D (405-41)
h. Little Bear Creek/Flint Creek, Variant E (327-191)
i. Little Bear Creek/ Flint Creek, Variant E (711-61)
j. Little Bear Creek/Flint Creek, Variant F (114-61)
k. Little Bear Creek/Flint Creek, Variant F (751-52)
l. Little Bear Creek/Flint Creek, Variant G (687-59)
m. Little Bear Creek/Flint Creek, Variant G (593-41)
n. Little Bear Creek/Flint Creek, Variant G (712-43)

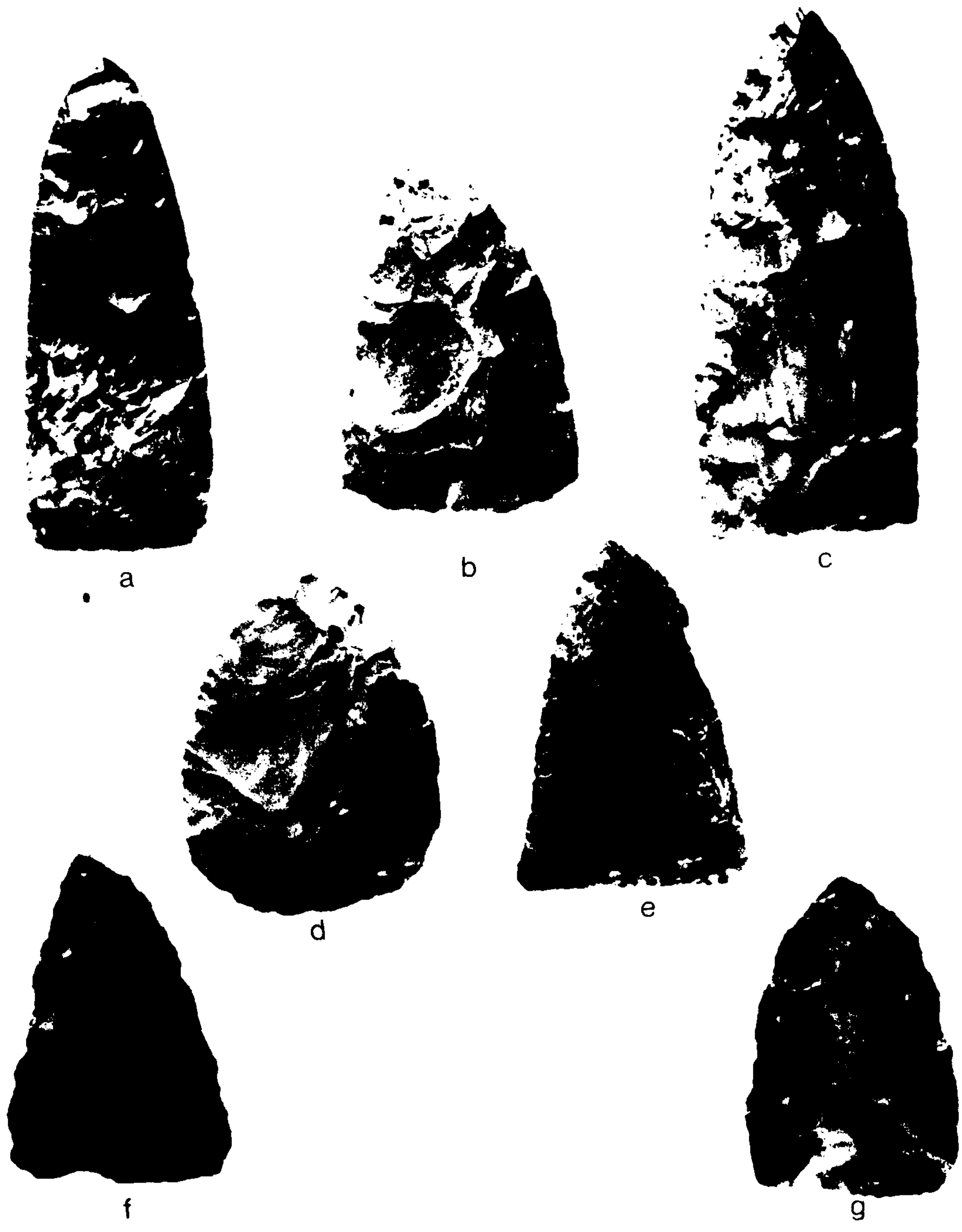


8.191

Figure 8.37

Site 22IT590: Selected Bifaces

a. Triangular Biface (860-1) Early Archaic
b. Triangular Biface (4218-1) Early Archaic
c. Triangular Biface (847-1) Early Archaic
d. Ovoid Biface (2749-1) Benton
e. Broad Based Triangular Biface (2746-1) Benton
f. Triangular Biface (601-4) Gulf Formational
g. Triangular Biface (779-1) Gulf Formational

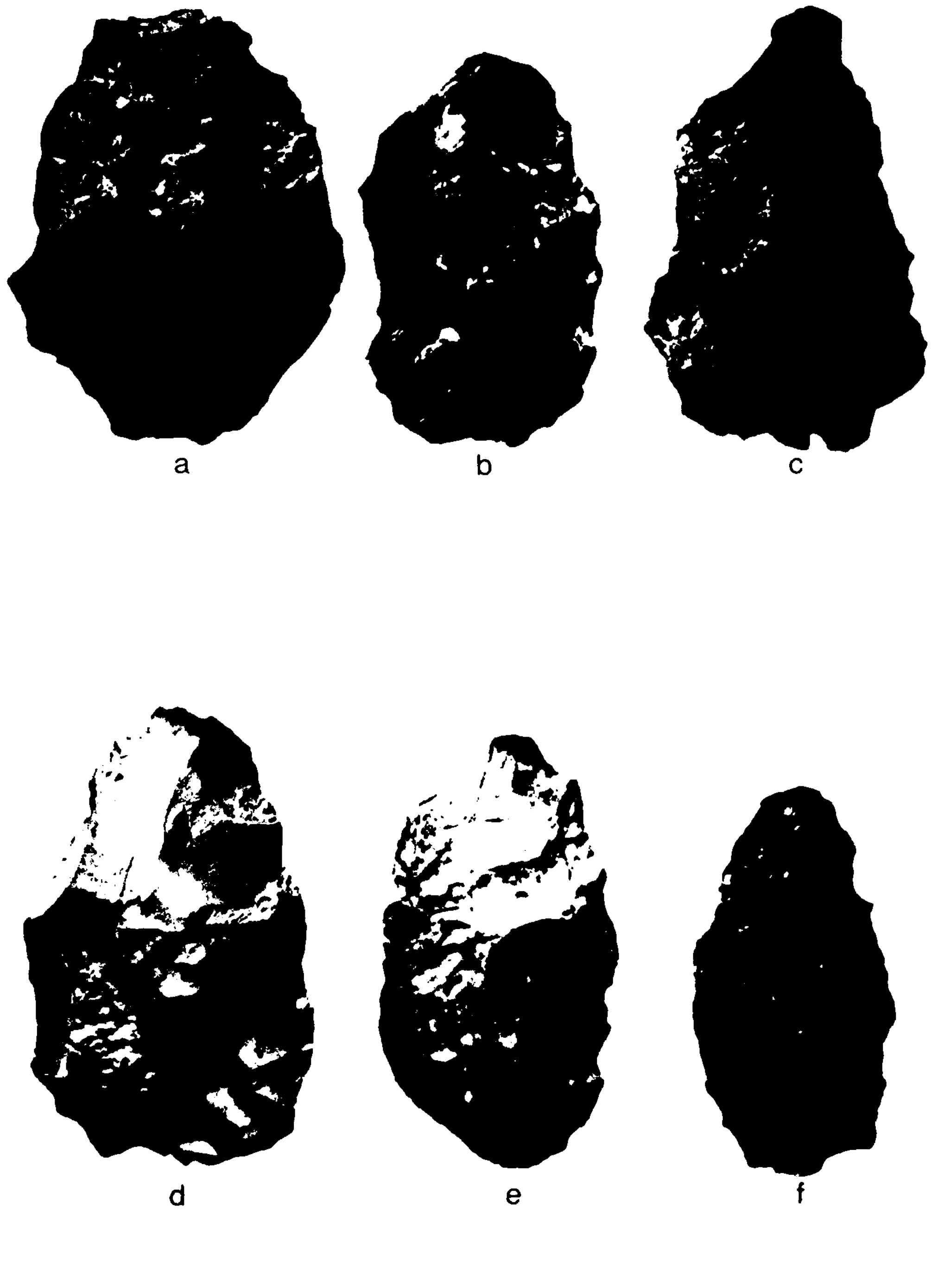


8.193

Figure 8.38

Site 22IT590: Selected Preform 1

a. 36551
b. 687-75
c. 785-5
d. 2703-1
e. 2398-1
f. 733-117

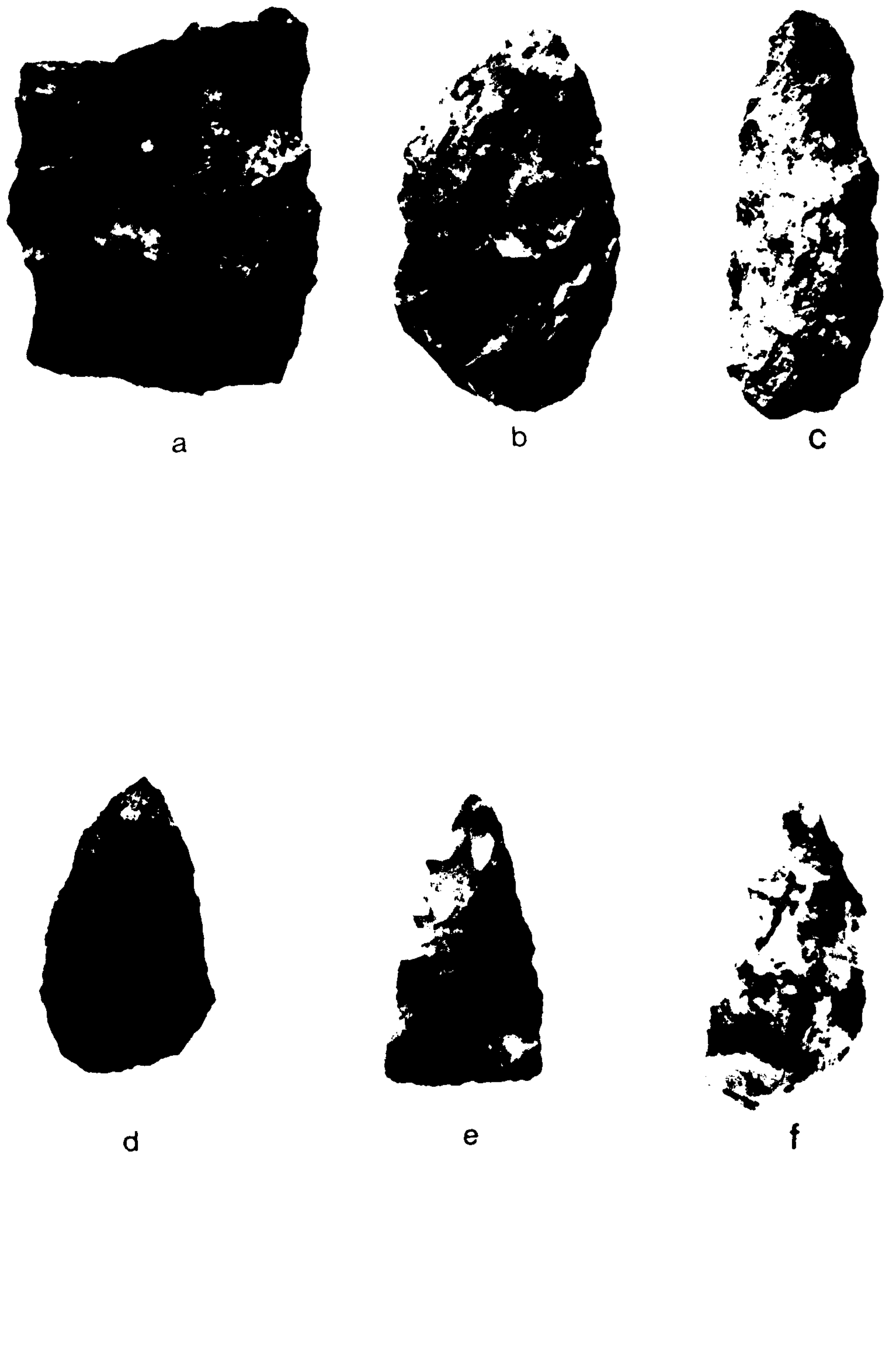


8.195

Figure 8.39

Site 22IT590: Selected Preform 2

a. 8114-1
b. 3600-1
c. 442-32
d. 2374-1
e. 3285-1
f. 550-57

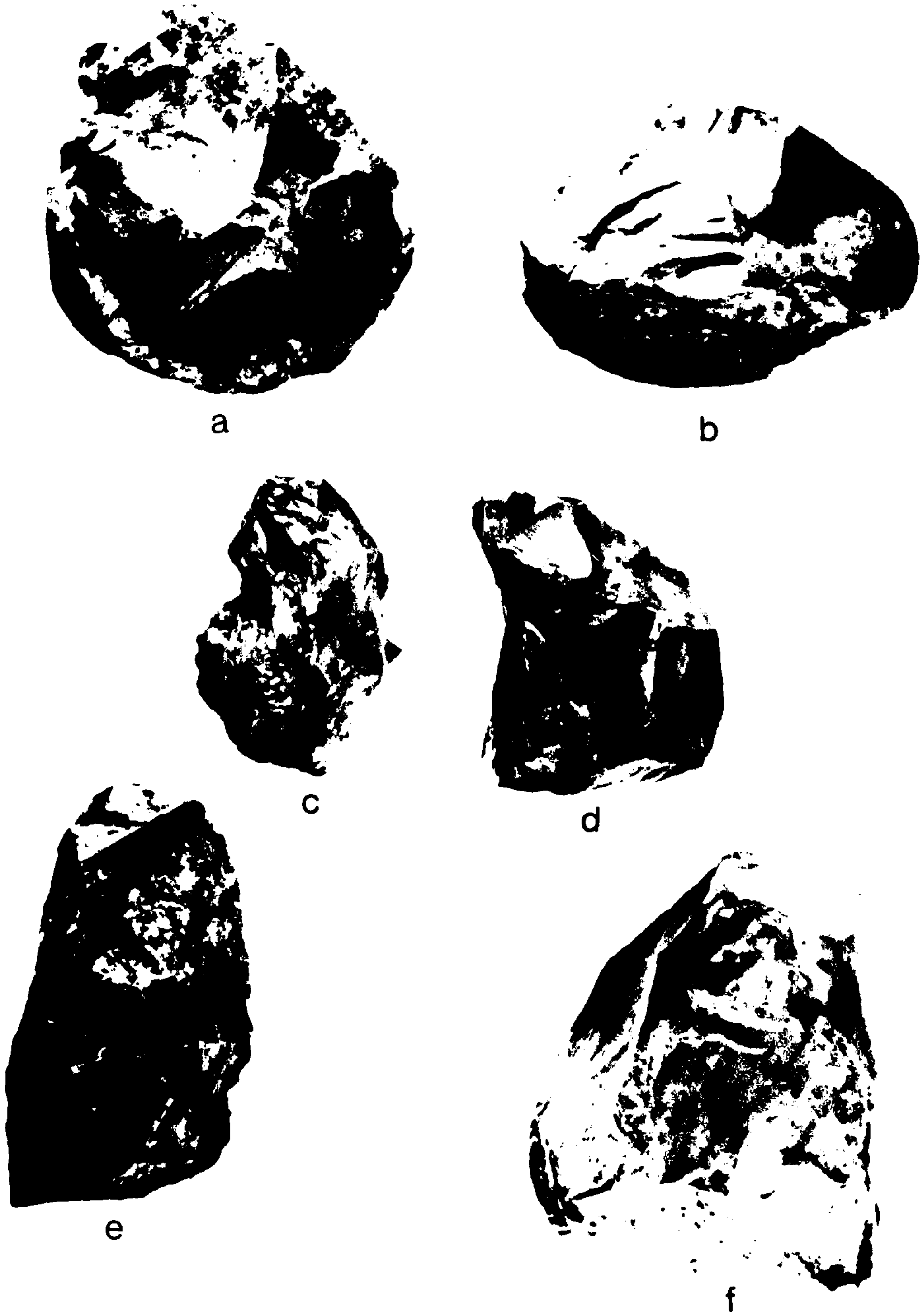


8.197

Figure 8.40

Site 22IT590: Selected Cores

a. 90° Unifacial (561-10)
b. 360° Bifacial (687-76)
c. 180° Unifacial (3496-2)
d. 180° Unifacial (739-6)
e. 180° Bifacial, Opposite (3723-1)
f. 180° Bifacial, Adjacent (3700-2)

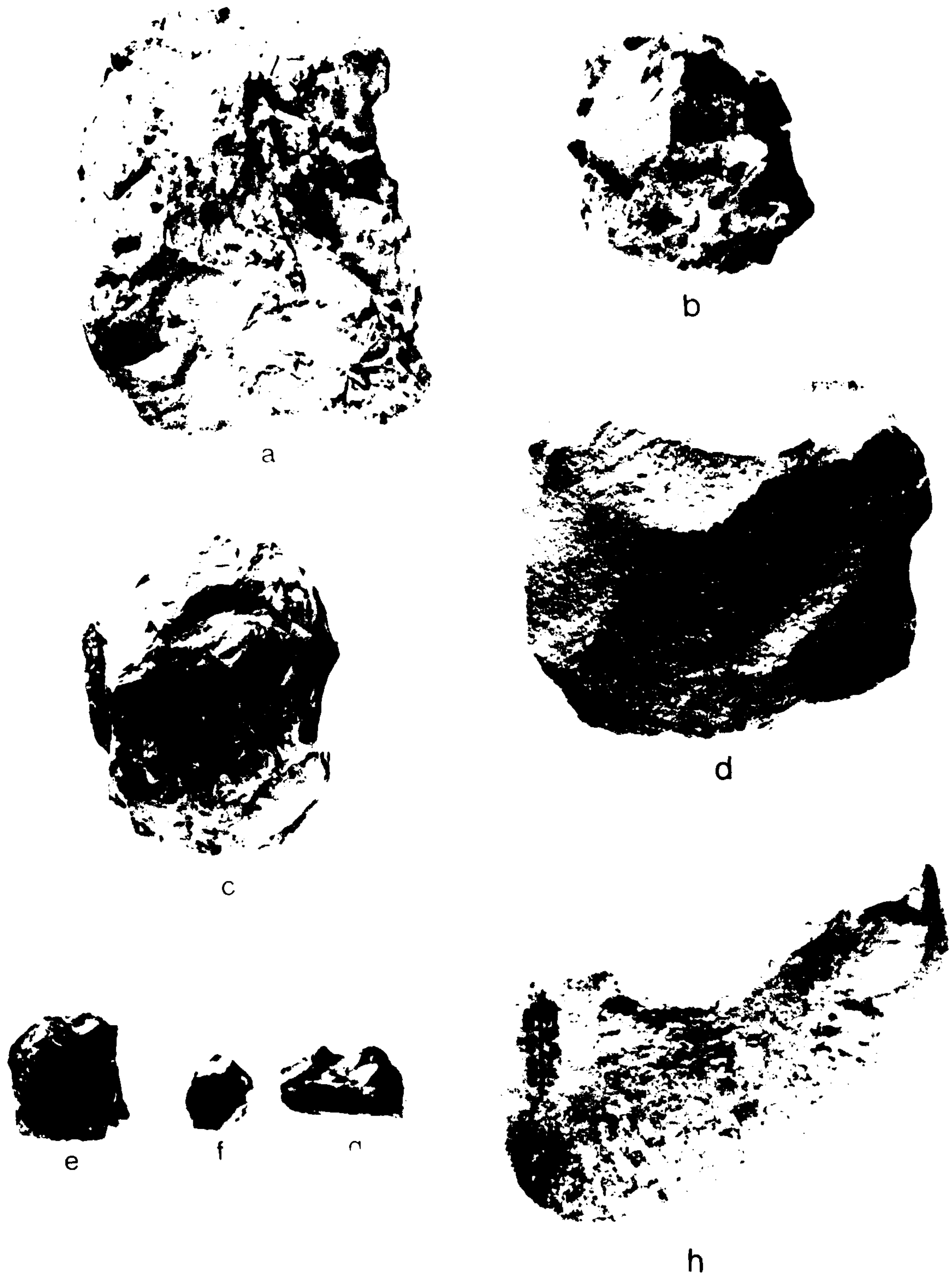


8, 199

Figure 8.41

Site 22IT590: Selected Cores

a. 270° Bifacial (1939-1)
b. 270° Bifacial (893-24)
c. 360° Bifacial (587-55)
d. 360° Bifacial (777-4)
e. Bipolar Core (1205-1)
f. Bipolar Core (2686-2)
g. Microblade Core (3999-1)
h. Core Other (3819-1)



8.201

Figure 8.42

Site 22IT590: Selected Scrapers

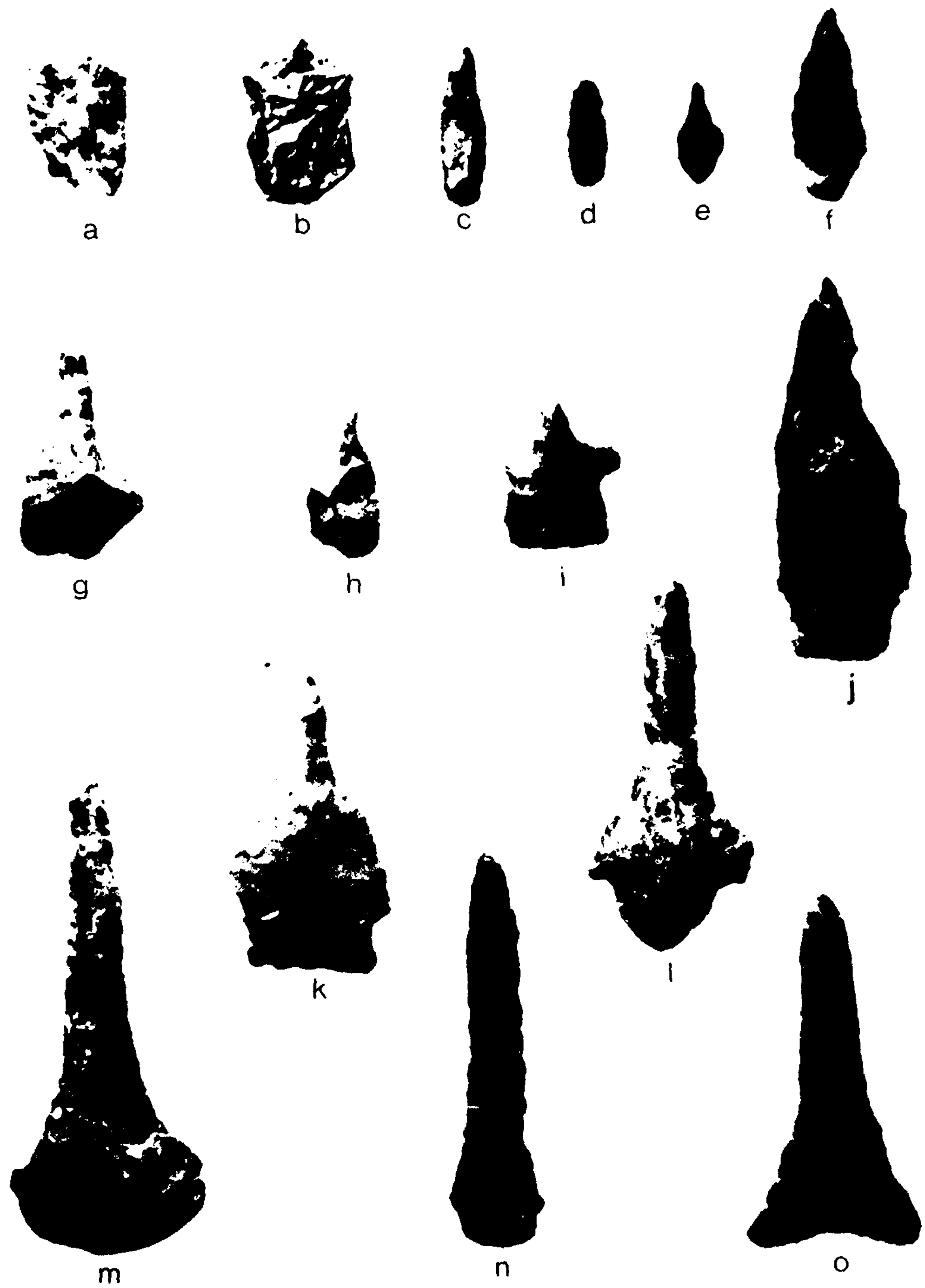
a. Uniface Side Scraper on Expanding Flake (2384-2)
b. Uniface Side Scraper on Expanding Flake (2320-2)
c. Uniface Side Scraper on Expaning Flake (3775-2)
d. Uniface Side Scraper on Expanding Flake (2081-3)
e. Uniface Side Scraper on Expanding Flake (3848-1)
f. Uniface Side Scraper on Other Flake (3864-1)
g. Other Flake, Unidentified (824-1)
h. Uniface Side Scraper on Blade-Like Flake (1485-1)
i. Uniface End Scraper on Expanding Flake (579-23)
i. Uniface End Scraper on Expanding Flake (151-7)
k. Scraper on a Biface (4184-1)
l. Hafted End Scraper (3502A-1)
m. Notched Flake-Spokeshave (312-64)
n. Notched Flake-Spokeshave (837-1)
o. Spokeshave (579-25)
p. Spokeshave (752-18)

8·203

Figure 8.43

Site 22IT590: Selected Drills, Perforators, Etc.

a. Graver (2163-1)
b. Graver (1740-2)
c. Microlith (1756-1)
d. Microlith (2229-1)
e. Micro-perforator (1932-2)
f. Perforator (555-70)
g. Perforator (804-4)
h. Perforator (2086-1)
i. Perforator ((690-120)
j. Reamer (2470-2)
k. Stemmed Drill (2266-2)
l. Stemmed Drill (740-1)
m. Expanding Base Drill (2700-1)
n. Expanding Base Drill (855-1)
o. Expanding Base Drill (3618-2)

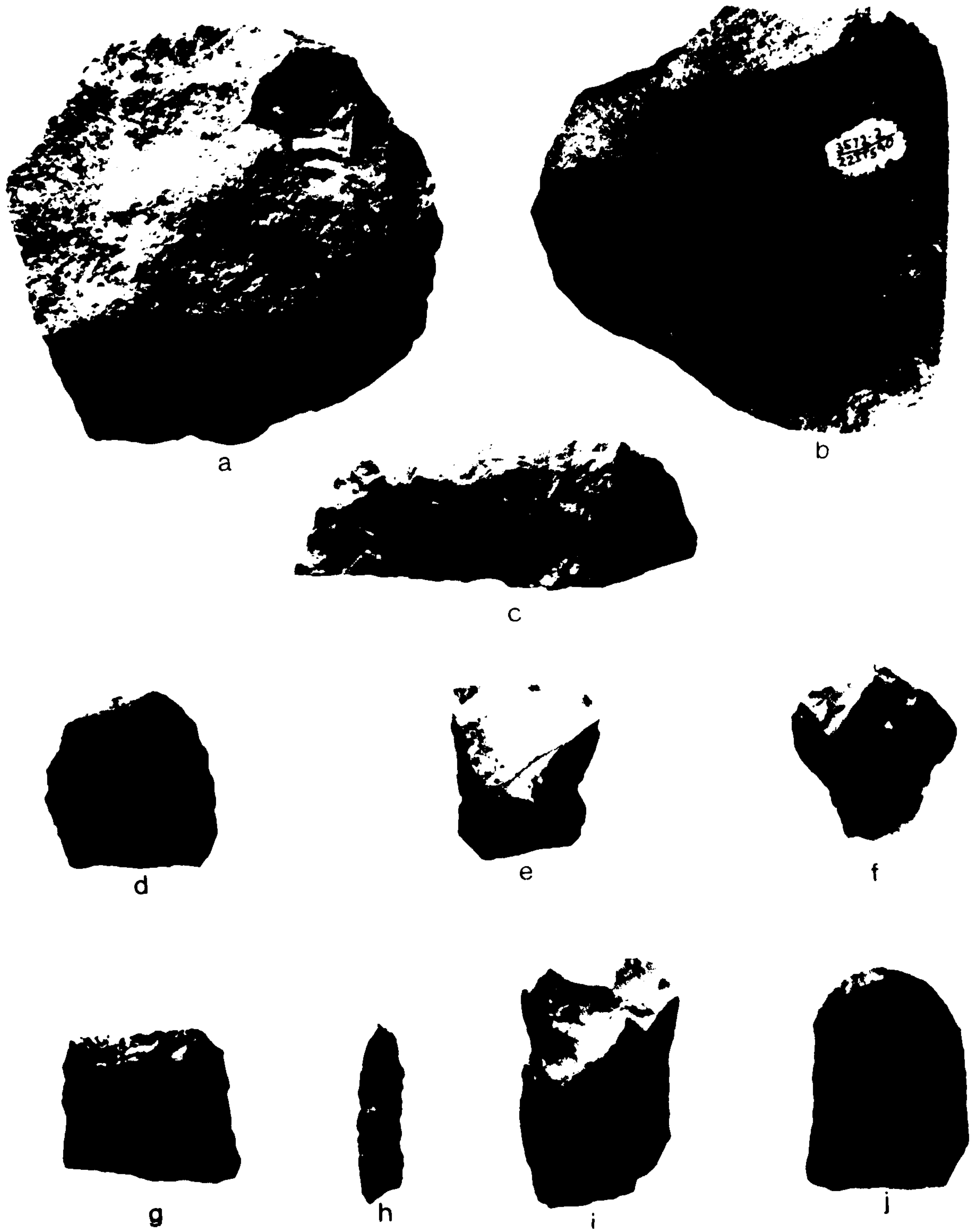


8.205

Figure 8.44

Site 22IT590: Selected Other Uniface & Biface Tools

a. Biface Chopper (1887-5)
b. Biface Chopper (3572-2)
c. Biface Digging Implement (114-75)
d. Chisel (2141)
e. Chisel (2435-2)
f. Chisel (960-7)
g. Adze/Chisel (2445-1)
h. Burinated Biface (1606-4)
i. Wedge (882-54)
j. Wedge (1613-4)



8.207

Figure 8.45

Site 22IT590: Selected Other Uniface & Biface Tools

a. Splintered Wedge (piece esquille) (655-109)
b. Splintered Wedge (piece esquille) (3805-3)
c. Biface Adze (2382-2)
d. Biface Adze (149-40)
e. Uniface Adze (1677-2)
f. Uniface Cobble Knife (358-1)
g. Uniface Flake Knife (852-58)
h. Uniface Flake Knife (2067-3)
i. Uniface Flake Knife (510-7)
j. Biface Flake Knife (2534-1)
k. Uniface Flake Knife (4018-3)
l. Uniface Flake Knife (1715-2)

8.209

Figure 8.46

Site 22IT590: Selected Other Uniface & Biface Tools and Ground Stone Tools

<u>Other Uniface & Biface Tools</u>

a. Uniface Chopper (1655-2)
b. Uniface Chopper (3361-3)
c. Chopper/Hammerstone (1823-2)
d. Hammerstone (4290-1)

<u>Ground Stone Tools</u>

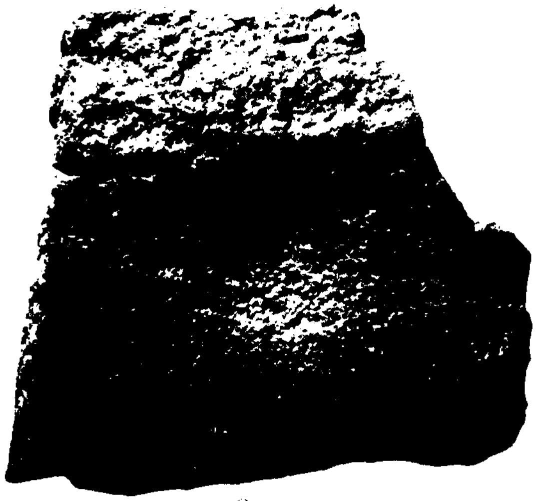
e. Gorget (808-1)
f. Awl (1939-7)
g. Awl (1939-8)
h. Bead (2292-5)
i. Drill Core (151-16)

8 21

Figure 8.47

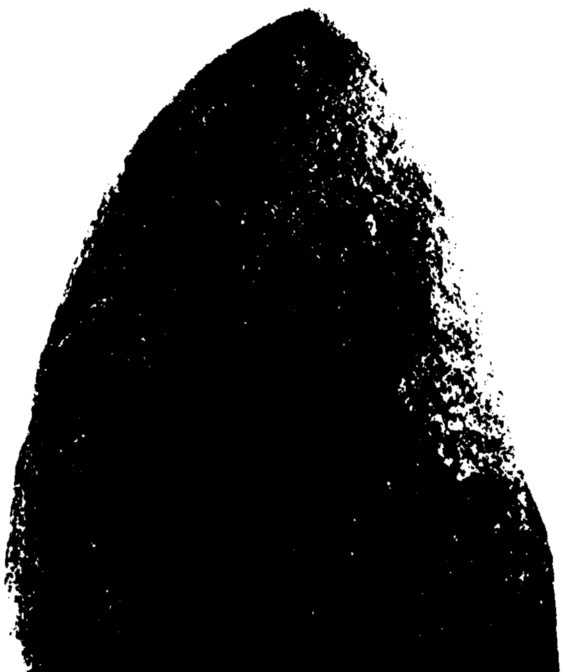
Site 22IT590: Selected Ground Stone Tools

a. Double Pitted Anvilstone (3270-28)
b. Muller (mortar) (490-366)
c. Pestle (2803-1)
d. Ground Abrader (163-10)
e. Grooved Abrader (767-26)



a

b



c

d

e

8.2/3

Figure 8.48

Site 22IT590: Selected Ground Stone Tools

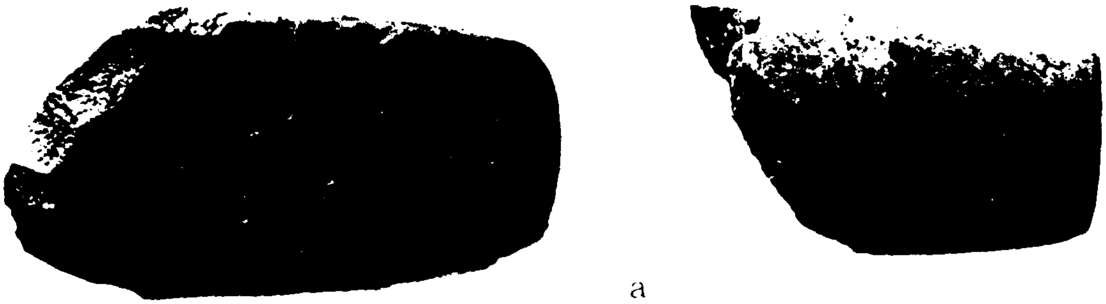
a. Grooved Axe (150-1)
b. Muller/Anvilstone (1597-564)
c. Atlatl Weight (2747-1)
d. Atlatl Weight (1855-4)

8.215

Figure 8.49

Site 22IT590: Selected Ground Stone Tools

a. Atlatl Weight (372-15)
b. Atlatl Weight (4136-1)
c. Atlatl Weight (2608)



a

b

c

8.217

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END
DATE
FILMED
DTIC

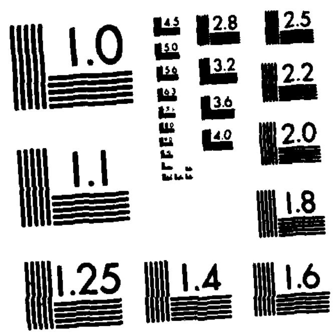
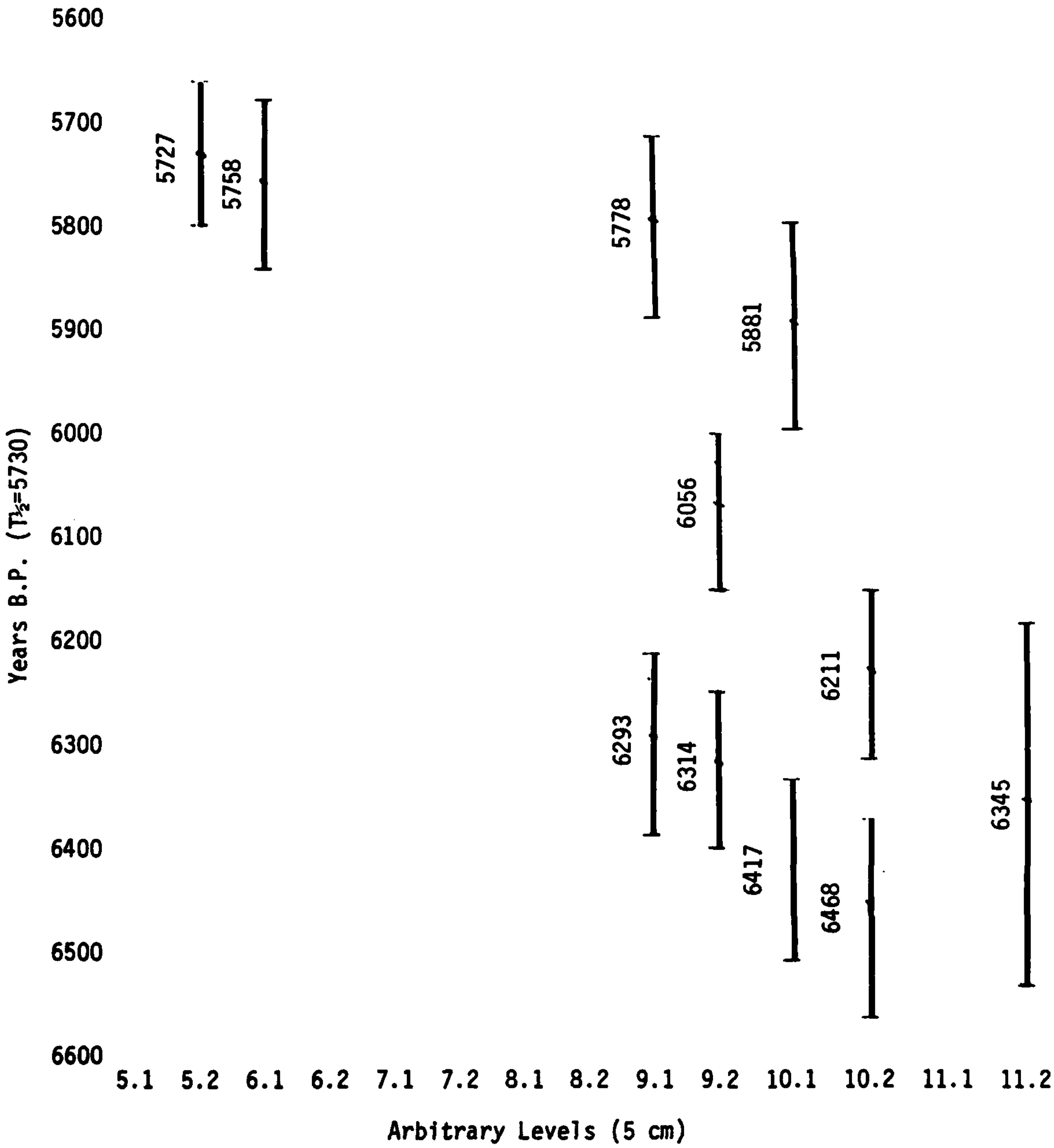

1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6

Figure 8.50

Site 22IT590: Radiocarbon Dates

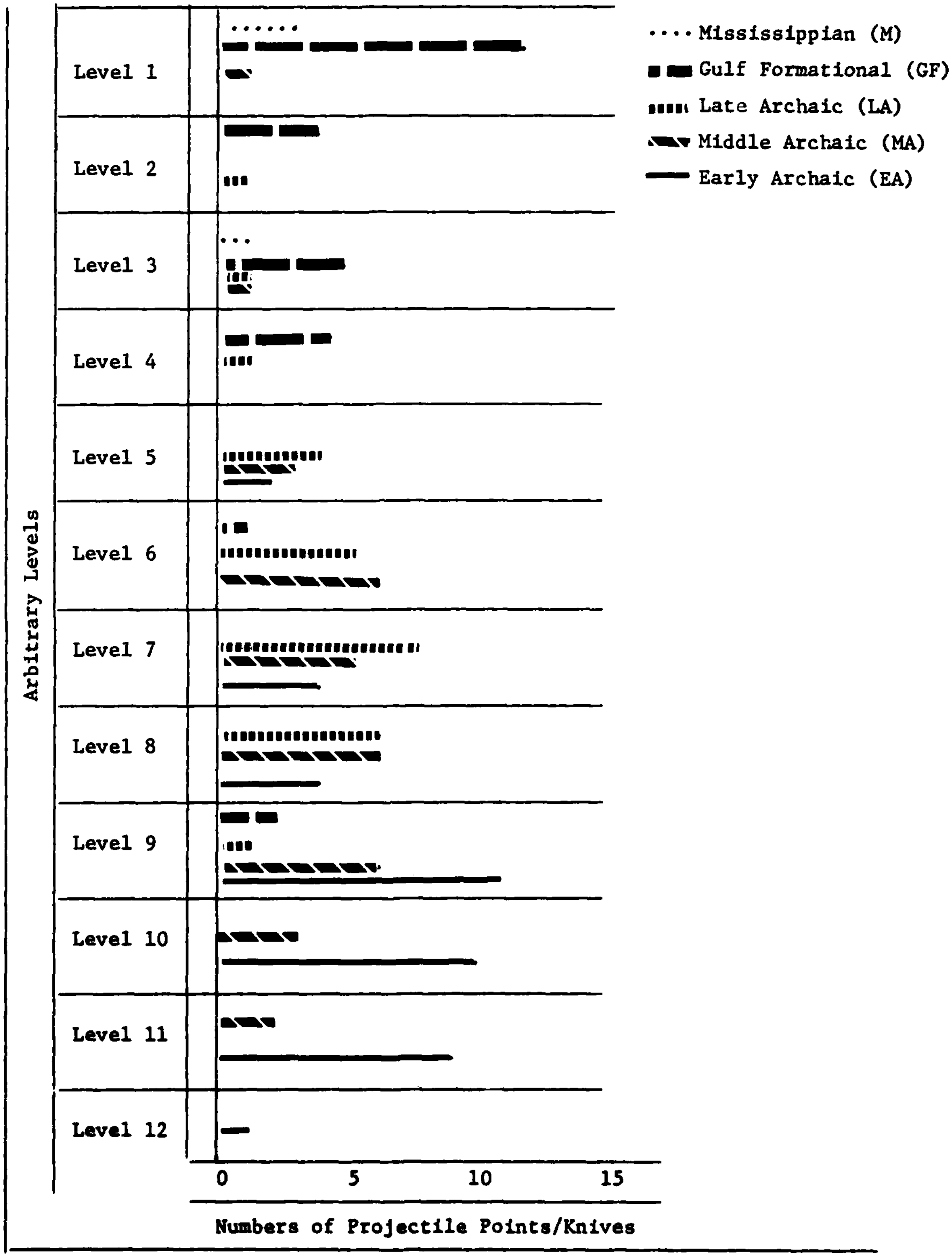


Years B.P. (T½=5730)
5600
5700
5800
5900
6000
6100
6200
6300
6400
6500
6600
5727
5758
5778
5881
6056
6293
6314
6211
6417
6468
6345
5.1 5.2 6.1 6.2 7.1 7.2 8.1 8.2 9.1 9.2 10.1 10.2 11.1 11.2
Arbitrary Levels (5 cm)

8;2 19

Figure 8.51

Site 22IT590: Stratigraphic Distribution of Projectile/Point Knife Complexes within Master Block (all clusters combined).



Mississippian (M)
Gulf Formational (GF)
Late Archaic (LA)
Middle Archaic (MA)
Early Archaic (EA)
Arbitrary Levels
Level 1
Level 2
Level 3
Level 4
Level 5
Level 6
Level 7
Level 8
Level 9
Level 10
Level 11
Level 12
0
5
10
15
Numbers of Projectile Points/Knives

LME

8